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ABILITY AND OPPORTUNITY IN ENGLISH EDUCATION

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I. INTRODUCTION

MODERN methods of psychological measurement, together with a growing interest in the qualitative aspects of the population problem both in England and in the U.S.A., have evoked numerous studies of the relative ability of different social groups within a community. The essential procedure adopted in these studies has been to compare average (mean) indices of ability, e.g. mean Intelligence Quotients. On this basis different social groups have been ranked in order of ability. Aside from the very dubious nature of the evidence adduced to support the general inference that any observed differences are exclusively or even predominantly genetic in origin, previous inquiries of this sort throw little light upon the fundamental problem to which this investigation is directed. However great may be the discrepancies recorded, the comparison of averages is of itself entirely inadequate to display the distribution of ability within a population of varied social composition.

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The problem which we have set out to examine may be put thus: To what extent does the existing machinery of social selection adjust educational opportunity to individual ability? In comparing average figures for different social groups we are comparing in effect the net capability of groups of individuals which make very varied contributions to the net personnel of the society in which they live. Let us suppose that in a population one social group A is ten times more numerous than another social group B, and that the proportion of specially gifted individuals (e.g. those above a certain level of I.Q.) is three times as high in B as in A. This may result in a very considerable superiority of the mean ability of the smaller group. Now suppose further that all individuals in group B, but none in group A, have access to a type of education suitable to individuals of the selected level of ability. The result would be, in spite of the superficial correspondence between the class distribution of ability and the class distribution of opportunity, that only three-thirteenths of the available high ability of the community would be utilized by the educational facilities it provided.¹ Recognition of this issue might serve to exhibit the distribution of high ability in the population as a whole in a less alarming light. It would also make it less easy to conceal the extent to which individual ability is wasted by a defective mechanism of educational selection.

The facts are, of course, more complicated than those in the illustration, which is given simply to clarify the nature of the

¹ Let A consist of 10,000 individuals of whom a proportion x have an I.Q. over 130, B consist of 1,000 individuals of whom a proportion y have an I.Q. over 130 and $x = \frac{y}{3}$.

In population A $\frac{10,000y}{3}$ have I.Q. 130, and

" " B 1,000y " " " .

Only 1,000y individuals are being used, when we have a total of $1,000y + \frac{10,000y}{3}$ superior individuals.

$$\frac{1,000y}{1,000y + \frac{10,000y}{3}} \text{ are being used} = \frac{1}{1 + \frac{10}{3}} = \frac{3}{13}.$$

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problem. It is no part of our intention to minimize differences between group averages nor to attempt to distinguish between such as are the result of environmental and such as are attributable to genetic differences. We may state in advance that this investigation is in no way contradictory to the observed findings of earlier studies. Indeed, in so far as our data differ from theirs, we have no hesitation in affirming that the mean differences which we disclose are actually greater than those previously recorded. We make the fullest allowance for the existence of genuine mean differences between the intelligence of different social groups within the population, and consequently accept for our present purpose a conservative or maximum estimate of the extent to which these differences are determined by genetic inequalities. This allowance is almost certainly too generous, but even when it is made, a striking discrepancy still remains between the amount of good material in the community and the extent to which the existing machinery of social selection utilizes it. The inequality of the distribution of educational facilities in relation to the distribution of educational ability within the several social classes in this country, as described in this investigation, affords no ground for complacency. On the contrary, it discloses a defect in our social organization more extensive than is commonly recognized.

Sections II-IV of this study are concerned with the principles on which we constructed our survey of the distribution of ability within the largest sample of the English school population yet examined, and contain the raw material of the investigation. The remaining sections consist of a more detailed institutional analysis of the data and present the main conclusions. In subsequent papers we hope to carry the argument still further by an analysis of the factors of parental occupation and fertility in the selective process.

No attempt has hitherto been made to compare adequate samples of children educated in schools of widely varied educational and social type. The recent nation-wide inquiry

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into *The Intelligence of Scottish Children* (1933) of a single age group included private as well as elementary pupils, but the data are not separately distinguished. In countries like the U.S.A. or Scotland, where the vast majority of children of different social levels are educated in State schools of similar type, such an undertaking may well appear of little consequence. Two selective factors in English education demand careful control when the ability of the school population as a whole is the subject of investigation. The first is that a large number of children receive an education the cost of which is defrayed, either wholly or in part, by their parents. The second is that in the public elementary school population the agency responsible for the selection of pupils for free education of a higher type operates in the great majority of cases once and for all at the age of 11 plus. Below this age the school population is divided into two parts, free and fee-paying pupils. Above it, this division persists and classification is further complicated by the selection from pupils of elementary school origin of a certain number who proceed to other types of schools. This selection is based mainly on ability, although its effect is limited by the extent of State expenditure on higher education. The majority remain in the ordinary elementary school until they leave at the age of 14, some proceed with scholarships to secondary schools, others are drafted into elementary schools of a higher type, i.e. central schools. Valid norms for the performances of school children at different ages on standardized psychological tests cannot be obtained unless adequate samples of every type of pupil are tested and combined in their proper proportions. In addition, account must be taken of pupils in fee-paying schools.

In this study more than ten thousand children from five different types of schools were examined during the year 1933-4. Data are presented concerning the distribution of ability in the entire group, in each type of school, in the group which receives the opportunity to pursue a higher education,

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and in the two contrasting groups of free and fee-paying pupils, with the aid of a system of weighting designed to take account of the selective factors mentioned above and of inequalities in our sampling.

II. THE NATURE OF THE SAMPLE

The kind of social behaviour selected for investigation is that measured by standardized intelligence tests of the type devised by Binet and Spearman in the beginning of the present century and developed by Burt, Terman and others. Such tests enable comparisons to be made between the performances of different individuals educated in the characteristic manner of the twentieth century and for the most part in schools maintained by the State, on problems which form an essential part of the curriculum of schools in most modern communities. By general consent these performances are described by the adjective "intelligent," and it is in this sense alone that we employ the word intelligence for the characteristic under review. The test selected was the Otis Group Advanced Test, Form A, which has been used by the Department of Social Biology in two earlier investigations into the intellectual resemblance of relatives. This test possesses a high reliability, is completely objective in scoring, is simple to administer and is extensively used both in the U.S.A. and in this country. The original norms for the calculation of Mental Ages were based on the scores of more than 25,000 American school children between the ages of 8 and 18 years. When comparing individuals of different ages, the chief criterion of any such test is its ability to yield an index of intelligence independent of age. Intelligence Quotients determined on the basis of American norms for Mental Age have been shown both by Herrman and Hogben (1933) and Gray and Moshinsky (1933) to correlate very insignificantly with age. The Otis Test has already been adapted by the publishers for use with English children, and further modifications, both in the printed test and in the *Manual of*

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Instructions, were suggested by the present writers and incorporated in the new edition of the *Manual* (1934). These modifications, which have been employed throughout this investigation, were designed to simplify and clarify the verbal and printed instructions for the administration of the test. We have naturally considered the use of various tests of English origin, but these were found to be defective under one or more of the criteria enumerated above.

The Otis Test includes ten categories of performance, namely, (1) Following Directions, (2) Word Opposites, (3) Disarranged Sentences, (4) Proverbs, (5) Numerical Problems, (6) Geometrical Figures, (7) Analogies, (8) Similarities, (9) Narrative Completion, (10) Verbal Memory.

The conditions under which the tests were administered were made subject to as rigid a degree of standardization as was possible in the circumstances. In addition to the two authors, four other full-time investigators were employed, and all attempted to maintain the same technique of administration. All the children of this study were tested by these six examiners and in no case were tests given by teachers or any other person. In certain matters, e.g. the number of children tested in a group, the spatial distribution of the children in a classroom, the absence of all adults other than the examiners, etc., we were able to secure a large measure of uniformity. It was not possible, of course, to control every environmental factor of conceivable relevance. Different groups of children were tested on different days of the week at different times of the day, and thus probably in different conditions of physiological and psychological efficiency; nor could we control the differences in the amenities of school construction which characterize schools of different social type. Thus in addition to differences between individuals and between groups which might exert their influence prior to the administration of the test, such as those commonly discussed under the general heading of differences due to nurture, there were other environmental inequalities sufficient

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in themselves, however slight, to make us alive to the possibility of a certain amount of error in the constants denoting Intelligence Quotients.

In each school examined all children who were within our age range and present on the day of our visit were tested simultaneously in one or more groups. Where the numbers on the school roll were too large for our staff to cope with, we adhered to a strictly random method of selecting the group that was actually tested. Thus there is no possibility that the samples from each school are imperfect by reason of selection for ability.

Since we could only test comparatively small samples of the total populations with which we were concerned, we tried to make them as representative as possible. The schools in the public elementary group (Junior, Senior and Central) were selected in such a way that practically every district in the L.C.C. area was included. Our sample also contains the material that was collected by the present authors for a recent investigation into the intellectual resemblance of first cousins and sibs. This was necessarily drawn from a much larger number of schools, since only a limited number of related pairs could be found in any one school. Altogether nearly one hundred schools were sampled in this group. We would add that we were careful also to include a certain number of non-provided schools, i.e. schools whose fabric is maintained by various religious denominations and other educational foundations, whose tradition is reflected in the personnel both of teachers and pupils, as also to some extent in the curriculum.

In the case of secondary schools, we were fortunate in being able to test approximately one-third of the total in London. These were likewise drawn from various parts of the city and include schools wholly maintained by the L.C.C. and those on the Grant List, both old and new foundations. In venturing to survey children in private and preparatory schools we were entering unknown territory. We could visit only

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such schools whose Heads responded to the invitation sent out by various interested bodies on our behalf. A study of the prospectuses of the schools tested and of the range of their means affords evidence of very considerable variety in both educational and financial status.

Table I shows the intellectual range of the schools in our sample. Figures for the mean I.Q. and I.B.¹ of every school were separately calculated and arranged in order of value. From this data we obtained the mean of the median school and the range of the means of the middle 50 per cent. of schools within each group. The table does not include the cousins and sibs data.

TABLE I
DISTRIBUTION OF MEANS OF SCHOOLS IN EACH GROUP

Type of School.	No. of Schools	Mean of Median School.		Range of Means of Middle 50 per cent. of Schools.	
		I.Q.	I.B.	I.Q.	I.B.
1. Elementary:					
(a) 9.0-11.0 ¹ . . .	16	113.7	99.8	108.7-121.6	89.6-104.0
(b) 11.1-12.6 ¹ . . .	17	116.1	98.5	110.3-118.6	90.0-101.9
2. Central	23	137.5	126.2	135.5-140.8	123.6-131.1
3. Secondary:	30				
(a) Free pupils . . .		148.8	147.3	146.9-151.4	143.3-151.4
(b) Fee-paying pupils.		131.7	119.2	126.2-133.8	111.9-122.2
(c) All pupils . . .		136.9	129.2	135.3-139.8	124.5-131.9
4. Private	14	122.9	109.7	119.9-126.7	104.8-112.1
5. Preparatory	26	134.0	123.9	129.0-137.0	115.9-128.3

¹ Excluding cousins and sibs data.

All the children tested in our samples of various populations were between the ages of 9.0 and 12.6 years inclusive. The decision to restrict the age range to these limits was based on the experience of the two previous investigations already mentioned. In these it was found that a significant proportion of children aged 8-9 years had to be rejected because they scored less than the norm for the earliest age for which norms have been calculated, namely, 8.0 years, and consequently could not be given an Intelligence Quotient. In

¹ For I.B., see below, p. 124.

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other words, data for this year of age would be selected for high intelligence. Similarly, in the case of children above 12.6 a substantial number achieve or exceed the score yielding the highest Mental Age on the American norms, namely, 18.0, and in these cases I.Q. does not rise with increasing score for children of constant age; in fact it decreases with increasing chronological age, regardless of differences in score. It is thus impossible to compare the performances of children scoring more than 130 points on the Otis Scale. I.Q. ceases to be independent of age and becomes entirely unreliable as an index of intelligence.

Table II shows the age distribution of the entire data classified according to different types of schools, together with the total numbers tested.

TABLE II
AGE DISTRIBUTION OF THE DATA IN THREE-MONTHLY INTERVALS

Age.	Elementary, 9.0-11.0.	Elementary, 11.1-12.6.	Central.	Secondary Free Pupils.	Secondary Fee- payers.	Private.	Preparatory.
9.0-9.2	234	—	—	—	36	26	34
9.3-9.5	245	—	—	—	36	39	46
9.6-9.8	272	—	—	—	46	39	80
9.9-9.11	279	—	—	—	63	46	51
10.0-10.2	276	—	—	1	82	41	52
10.3-10.5	263	—	—	5	98	53	66
10.6-10.8	299	—	—	3	121	58	71
10.9-10.11	294	—	—	5	100	65	78
11.0-11.2	100	188	—	69	149	46	62
11.3-11.5	—	259	105	168	177	49	77
11.6-11.8	—	244	319	203	174	76	81
11.9-11.11	—	253	423	187	155	48	96
12.0-12.2	—	249	532	197	168	54	77
12.3-12.5	—	221	570	155	209	67	90
12.6	—	39	82	44	47	22	26
Totals	2,262	1,453	2,031	1,037	1,661	729	987

III. RELIABILITY

Assuming that an intelligence test correlates highly with independent estimates of intelligence and is internally homogeneous, it remains to be proved that it is *reliable* in the sense

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that, when administered to the same group on two successive occasions, the order of the indices within the group is not materially altered on the second occasion, i.e. that there is a high correlation between the I.Q.s awarded on both occasions. Kelley (*The Interpretation of Educational Measurements*, p. 299) gives a reliability coefficient for the Otis Test of $r = +0.967$. The present authors examined the reliability of the Otis Test in two experiments. In the first 277 children aged 9.0-12.6, taken from three elementary schools, were tested with Form A, and ten days later with the alternative Form B. The value of the correlation between the I.Q.s was $r = +0.89 \pm 0.0007$. The corresponding figure for the Index of Brightness (see below) was $r = +0.95 \pm 0.0002$. In the second experiment 110 children from another elementary school were tested with Form A and retested with the same form after an interval of one year. The correlations were: I.Q., $r = +0.85 \pm 0.027$; and I.B., $r = +0.92 \pm 0.015$. These correlations are very high and demonstrate that the performance of an individual on the Otis Test bears a constant relation to the performance of other members of the group in which he is tested, when all are tested on two successive occasions. In other words, the test appears to measure the same thing when given on two different occasions.

The most essential requirement of a test of intelligence is that it should be capable of yielding an index independent of age, i.e. that it should enable us to compare on an absolute scale the intelligence of persons of different ages. Herrman and Hogben found correlations between age and I.Q. for twins and siblings between the ages of 8.0 and 14.0 of $r = -0.16$ and $r = -0.12$ in two groups of children arranged so as to eliminate the factor of genetic relationship. In the case of sibs only, the data were divided into two sections, composed respectively of the older and the younger members of each related pair. The correlations were $r = -0.08$ for the younger and $r = -0.35$ for the older

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group. Their sample was drawn from junior and senior elementary schools only. They drew attention to the selective factor introduced at the age of 11 plus by the Junior County Scholarship Examination. The children who did not proceed to central or secondary schools constituted a relatively backward group, which would partly account for the negative correlation between age and I.Q. in the older group. It should also be noted that the same thing will occur when a large proportion of the children in a group score above the maximum for which Mental Ages are assigned. Herrman and Hogben showed further that between the ages of 9.0 and 12.6 the mean I.Q. of different age groups was subject to less variation than was the case below or above these limits. In consequence, Gray and Moshinsky in a later study of cousin and sib resemblance restricted their data to this age range. They obtained for two samples of 610 and 611 respectively correlations between age and I.Q. of $r = +0.005$ and $r = +0.02$. Primarily because these correlations were so close to zero, we decided to adopt for the present investigation the same restriction of age.

Column 1 of Table III gives the values for the correlation between age and I.Q. for each separate type of school. It will be noticed at once that the figures for central and secondary scholarship children are in striking contrast with the rest. These two groups are selected for high intelligence, and thus by far the largest proportion of individuals have scores above the figure for the computation of maximum Mental Age. For the Otis Test the raw score corresponding to the maximum Mental Age is 130. So, if a sample of children be selected all of whom attain or exceed this score, and thus have the same maximum Mental Age of 18.0, the magnitude of their I.Q.s will vary inversely with their chronological age, and the correlation coefficient for age and I.Q. would be negative in sign and unity in value. Thus in the testing of school populations selected on the basis

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TABLE III
I.Q.—AGE AND I.B.—AGE CORRELATIONS

Type of School.	Age and I.Q.		Age and I.B.	
	<i>r</i>	N	<i>r</i>	N
1. <i>Elementary, 9.0-11.0:</i>				
(a) Present investigation	+ .0008 ± .026	1,419	- .01 ± .026	1,496
(b) Cousins and sibs ¹ (i)	+ .03 ± .052	371	+ .03 ± .049	370
(ii)	- .01 ± .053	360		
2. <i>Elementary, 11.1-12.6:</i>				
(a) Present investigation	- .16 ± .031	994	- .18 ± .030	1,011
(b) Cousins and sibs ¹ (i)	+ .02 ± .066	231	- .01 ± .064	235
(ii)	- .11 ± .063	244		
3. <i>Central Schools</i>	- .09 ± .022	2,026	- .04 ± .022	2,026
4. <i>Secondary Free Pupils:</i>				
(a) Junior county scholars	- .50 ± .028	700	- .05 ± .038	700
(b) Other free pupils	- .30 ± .050	337	- .07 ± .052	338
(c) All free pupils.	- .41 ± .026	1,037	- .04 ± .031	1,038
5. <i>Secondary Fee-payers</i>	+ .02 ± .025	1,652	+ .02 ± .025	1,661
6. <i>Private</i>	+ .04 ± .038	706	+ .05 ± .037	728
7. <i>Preparatory</i>	- .02 ± .032	982	+ .06 ± .032	988
8. <i>Private and Preparatory combined</i>	+ .001 ± .024	1,688	+ .06 ± .024	1,716

¹ In the cousins and sibs data two samples have been taken for the I.Q. to avoid having related pairs in the same table. Only one of the two samples has been worked out for the I.B.

of ability the I.Q. technique is gravely defective. In such cases it is impossible to make valid comparisons between the intellectual indices of different individuals.

These considerations made it necessary for us to seek for an alternative index by which individuals could be reliably assessed for performance on the Otis Scale. It was decided to adopt in this investigation, side by side with the more familiar I.Q., a device invented by Dr. Otis for use with his intelligence scale, namely, the Index of Brightness. I.B., as it will henceforth be described, is a measure of the increment or decrement of an individual's score from the normal score of persons of his exact chronological age, the norm being in all cases expressed as 100. For example, if an individual

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scores 10 points more than the norm for his age, his I.B. will be 110. Similarly, if he scores 10 points less, his I.B. will be 90. It follows that the I.B. of an individual of given chronological age rises with increasing score without limit. Thus the I.B. makes it possible to compare the intellectual rank of children, even in groups highly selected for ability. Moreover, where the variability of the distribution of the scores at each age is approximately identical, the I.B. provides a reliable absolute scale on which to assess the intelligence of children of different chronological age.

In the calculation of I.B.s it is not necessary to know the normal scores for any individuals outside the age group actually assessed. We therefore took the opportunity of deriving new norms for the Otis Test administered to English school children. It has long been evident to us that the American norms, on which the I.Q.s in this investigation are based, are throughout of a much lower order than the scores actually made by children in the London area. It would be highly desirable to calculate English norms for the whole age range comprehended by the Otis Test. If this were done and if it were found that they are throughout on a higher level than the American norms, then the point at which the I.Q. becomes unreliable by reason of the upper limit of Mental Age would be considerably postponed, and hence the I.Q. technique would become more useful than it is at present. But the construction of a complete set of norms based on samples of adequate size for each month of age would have been too formidable a task to be undertaken as part of the present investigation. We do not believe that it could be successfully accomplished with fewer than twenty to thirty thousand individuals. We had, therefore, to be content with deriving new norms applicable to English school children in the London area between the ages of 9.0 and 12.6 years. This restricted age range, together with the largeness of our total sample, enabled us to base the norms for each unit of age on a much greater number of cases than has been used,

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to the best of our knowledge, in any previous attempt to derive norms for any group test.¹

The second column of Table III shows the superiority of the I.B. over the I.Q. as an index of the intellectual rank of children in selected populations. It may be useful to add, since elsewhere in this investigation the data of I.Q. and I.B. are printed side by side, that in the case of secondary school scholarship children and central school children the I.B. figures are to be regarded as more reliable than those for I.Q. This conclusion also applies in a lesser degree to the cases where such data are combined with other data to produce weighted figures referring to the whole population of elementary school origin. It should further be noted that the manner in which the I.B. is determined makes it a more sensitive index than I.Q. and that consequently the standard errors of the various mean figures herein presented are greater in the case of I.B. than of I.Q.

IV. THE STRUCTURE OF THE ENGLISH EDUCATIONAL SYSTEM

To obtain a representative sample of English school-children within our age range, no less than five different types of schools require to be included. These are Public Elementary (usually divided into Junior and Senior schools), Central (for administrative purposes, part of the Elementary school system), Secondary, Private and Preparatory. In the case of the secondary schools, moreover, the pupils must be further divided into two groups, one consisting of children selected by scholarship examinations from the elementary schools, the cost of whose education is wholly or in great part defrayed by the State, and the other of fee-paying pupils amongst whom there exists little or no selection for intelligence.

¹ It is hoped to describe the technique employed to compute these norms in a later communication. Comparative tables of the original American and the new English norms will be found in the *Manual of Directions for Administering the Otis Test* (Harrap, revised edition, 1934).

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The school population of England and Wales falls naturally into two great groups of strikingly unequal size: (1) free pupils, and (2) fee-paying pupils. Under (1) are grouped pupils in both types of elementary schools, in central schools and those in secondary schools who possess scholarships or free places. (2) includes secondary school fee-payers and children attending private and preparatory schools.

(1) *Free Pupils*

The great majority of children in this country begin their education round about the age of 5 in schools provided by the State and are compelled to remain at school at least until the age of 14. But they do not all remain at the same type of school. The elementary school population is sub-divided at the age of 11 plus as a result of a scholarship examination attempted by a large proportion of all children, with the exceptions of the few who have been drafted into special schools for the physically and mentally retarded. Only up to the age of 11, therefore, would a random sample of the population of elementary school origin be found in one type of school.

In order to obtain mean figures for the ability of children of elementary school origin over the age of 11.0, we have combined samples of elementary, secondary scholarship and central school children and weighted them according to the proportions in which they respectively occur. Our samples of these three types of schools are elementary 11.1 to 12.6 = 1,457, central = 2,026, and secondary scholarship pupils = 1,038. As will be seen, the last two samples are disproportionately large, but we were anxious to ascertain as reliably as possible the distribution of ability amongst free pupils in central and secondary schools, who, so far as we know, have not been included in any previous investigation of this kind.

The Education Officer of the L.C.C. kindly supplied figures referring to the numbers of junior county scholars, central school pupils and residual elementary school pupils

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aged 11.0 to 12.0 for the year 1932-3. Our sample of the last group stood in the ratio of 1 : 53 of the total in London, and of the central school pupils in the ratio of 1 : 7.8. We estimated that the total number of free pupils in secondary schools in London other than junior county scholars bore the same relation to the figure for junior county scholars as in our sample, namely, five-twelfths. We are thus able to state that our sample of all free pupils in secondary schools stood in the ratio of 1 : 3.6 of the London total. We assumed further that the same proportions would hold in all three cases for children between 11.1 and 12.6 years as between 11.0 and 12.0. The weights finally employed were elementary 11.1 to 12.6 $\times 14$, central $\times 2$ and secondary school free pupils $\times 1$.

In order to make statements concerning the mean of all free pupils over our entire age range of 9.0-12.6, it was only necessary to assume that children aged 9.0-11.0, of whom we tested 2,261, were in the proportion 4 : 3 to children aged 11-12.6, since the age range of the former is $\frac{4}{5}$ of the latter and our samples of both were in approximately the same proportion to the total number in London.

(2) *Fee-paying Pupils*

While no unanimity exists in the classification of schools outside the public elementary system, we believe that a clear line of demarcation may be found in the acceptance or otherwise of financial aid from the State. Accordingly, we have restricted the term Secondary to schools either wholly maintained by or in receipt of financial grants from the State. These grants are conditional not only on a certain standard of efficiency being maintained, but on the provision by the school authorities of a certain number of scholarship places to pupils from elementary schools. Other schools exist which provide an education of a post-primary type, some of whom apply to the Board of Education for recognition as "efficient." There is no exact information available about

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the number of schools which are not inspected by the Board, nor is it known precisely what educational standards prevail among them. It is possible, however, to distinguish within the group of schools not on the Grant List one fairly homogeneous type commonly known as Preparatory schools. We have defined a preparatory school as one which is primarily concerned with preparing children for entrance to the public schools, i.e. schools belonging to the Headmasters' Conference, and which impose an upper age limit of 13 years. We have further confined the term to schools whose Heads are members of the two Associations of Headmasters and Headmistresses respectively of Preparatory Schools. Children in public schools, being for the most part upwards of 13 years, fall outside the scope of this investigation, but it will be seen that we have tested a sample of the same population at an earlier age.

Schools which are neither on the Grant List nor Preparatory, in the sense in which we have used the term, we have classified as Private. Like most of the preparatory schools, they are conducted for profit, but they offer an education alternative to both the elementary plus secondary school on the one hand, and the preparatory cum public school system on the other. As a rule they impose no upper age limit. There are a few large public day-schools in London which are neither on the Grant List nor conducted for profit. Where the scale of fees charged was comparable with that of grand-aided secondary schools, they were classified with the latter, not with private schools. They are all, of course, recognized as "efficient" by the Board of Education.

We are conscious of the imperfections of our samples of preparatory and private schools. We suspect, in the first place, that the figures in our data for the intelligence of such children are inflated by the inclusion of too high a proportion of the better schools. Secondly, there is no reliable evidence available concerning the relative proportions of private and preparatory schools. Hence we have had to group them

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together. Since the mean for preparatory schools is considerably higher than that for private schools, it follows that, according as the proportion of preparatory to private schools is greater or less, our figure for the combined group is either too high or too low. It must also be taken into account that twenty-six preparatory schools are represented in our data, compared with only fourteen private schools. Reference to a publication entitled *Schools 1934* (Truman and Knightley) shows that in the London Postal Area there are three times as many private as preparatory schools. But we do not know if this work is complete, nor if the distribution of pupils corresponds with that of schools. It would also be rash to conclude that the same proportion exists for the country as a whole. While we lack an estimate accurate enough to form the basis of any argument in this investigation, it is sufficiently clear that the assumptions adopted here lead to a considerable exaggeration of the average ability of children in the combined private and preparatory school population.

The task of determining figures for the intelligence of the entire class of fee-paying pupils is one of considerable difficulty. We tested 1,661 fee-payers in thirty secondary schools in the London area, or a proportion of approximately 1 : 3.6 of all schools on the Grant List (and including several which we have specially defined as secondary schools). Official statistics do not reveal the total number of *pupils* within our age group in London secondary schools, and we had to assume that it stood in the same relation to our sample as did the total number of schools to the schools in our sample. The Report of a Departmental Committee of the Board of Education on Private Schools (1932) estimates that there are 350,000 children between the ages of 5 and 14 years in private and preparatory schools together. To find the approximate number in London within our age group 9.0-12.6 the following method was adopted. We estimated that there were 217,000 children in London public elementary schools within this age range. Now, the proportion of

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preparatory and private school children to public elementary school children in the country as a whole is one-fifteenth. Assuming that the same proportion held good in London within our age range, our sample of 1,716 stood in the ratio of 1 : 8.5 to this figure. For convenience in arithmetic we employed the equivalent whole numbers 3 and 7 as weights for the secondary school fee-payers and preparatory and private school children respectively instead of 3.6 and 8.5.

V. THE SIGNIFICANCE OF MEAN DIFFERENCES

Table IV shows the means for each type of school population separately, together with the number of individuals tested.

TABLE IV
MEANS OF DIFFERENT SCHOOL POPULATIONS

Type of School.	I.B.	N	I.Q.	N
Elementary, 9.0-11.0 . . .	97.2 ± 0.58	2,261	113.8 ± 0.47	2,150
Elementary, 11.1-12.6 . . .	93.2 ± 0.78	1,457	110.8 ± 0.57	1,469
Central	126.8 ± 0.40	2,026	137.3 ± 0.29	2,026
Secondary Free Pupils . . .	147.3 ± 0.57	1,038	148.8 ± 0.30	1,037
All Free Pupils	98.4 ± 0.43	6,782	115.9 ± 0.34	6,682
Private	108.4 ± 1.11	728	122.9 ± 0.88	706
Preparatory	126.9 ± 0.96	988	136.2 ± 0.72	982
Private and Preparatory . .	119.0 ± 0.76	1,717	130.6 ± 0.58	1,688
Secondary Fee-payers . . .	118.8 ± 0.66	1,661	130.4 ± 0.52	1,652
All Fee-paying Pupils . . .	118.9 ± 0.57	3,378	130.6 ± 0.43	3,340
Mean of All	100.1 ± 0.40	10,160	117.1 ± 0.31	10,022

It will be seen that the mean I.Q. of every type of school is considerably in excess of 100. This makes it impossible to compare I.Q.s for English children taking the Otis Test with those derived from other tests. The comparison of groups within the present investigation is not of course affected, although for reasons already mentioned it is less valid than comparisons using I.B. The fact that the mean for the random group of elementary school children (9.0-11.0) is less than the mean for the whole population of free pupils

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may be attributed to a certain amount of selection that occurs even under the age of 11. The decline in the mean of the residual elementary group (11.1-12.6) is evidence of the selection of many of the abler children over 11 years of age to secondary and central schools. It is interesting to observe that the mean of the secondary scholarship pupils is greatly in excess of the figure for any other group, while the central school mean is the same as the preparatory. The figures for I.Q. disguise the extent of the superiority of the secondary scholarship and central school means, because, as already explained, the I.Q. technique with the Otis Test artificially depresses the indices for children of exceptional ability. Taking the I.B. figures, the excess of the secondary scholarship mean over the mean of all free pupils is 48.9 points and over the mean of the entire school population, 47.2 points, as compared with the corresponding figures for I.Q. of 32.9 and 31.7 respectively.

The means for the two contrasting groups of free and fee-paying pupils and for the entire school population within our age range were calculated in the following way. On the basis of official statistics relating to the year 1931-2, we estimated that there were 2,305,000 children in public elementary (including central) schools in England and Wales between the ages of 9.0 and 12.6. In secondary schools there were 106,000, of whom 41,000 were free pupils. This makes a total of 2,346,000 children in receipt of free education. The number of fee-paying pupils is approximately 215,000, of whom 65,000 are in secondary schools and 150,000 in private and preparatory schools. This last figure was calculated on the assumption that the proportion of private and preparatory school pupils aged 9.0-12.6 to the total aged 5-14 was the same as in the case of the elementary school population. Thus we find that for every one pupil within our age group in a fee-paying school there are eleven receiving free education.

The difference between the means for the two contrasting

ABILITY AND OPPORTUNITY

groups of free and fee-paying pupils is 14.7 points of I.Q. and 20.5 points of I.B. For the present purpose, however, it would be highly misleading to restrict the comparison of the intellectual composition of these two groups to a comparison of their means. Knowledge of the two means would be valuable if we wanted to decide whether any other two random samples of the school population were more likely to belong to one group than to the other. But it would be useless if we wanted to know the proportion of individuals of high or of low ability in the combined groups. The proper statistical index by which to describe the nature of a population can be decided only with reference to the specific purpose for which information is required. For example, it may be more important to know the range of values for any variable whose frequency corresponds with the majority of the individuals in the population. Let us suppose that there are two populations of five individuals each. In the first the incomes of the individuals are £800, £100, £50, £25 and £25. In the second they are all £200. The mean income of the two groups is identical, but in the former 80 per cent. of the individuals have an income of half or less than half the average. Here the measure of majority tendency would be in striking conflict with the measure of central tendency. In other words, the "average" income would be very different from the income of the "average" man. The indiscriminate use of measures of central tendency in social statistics is greatly to be deplored. When it is stated that the income of the unemployed is, *on the average*, sufficient for the maintenance of a diet of given proportions, it is too readily assumed that no widespread under-nourishment exists. Many people make the utterly unwarranted inference that all or most of the unemployed do in fact possess this income. On the contrary, any number of income-values ranging up to just short of 100 per cent. of all the values, may lie above or below the mean, according to the shape of the curve of the distribution of the values.

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The prevailing conception of the superiority of the mean as a description of the essential nature of a group of values is bound up with its origin as the most probable estimate of the

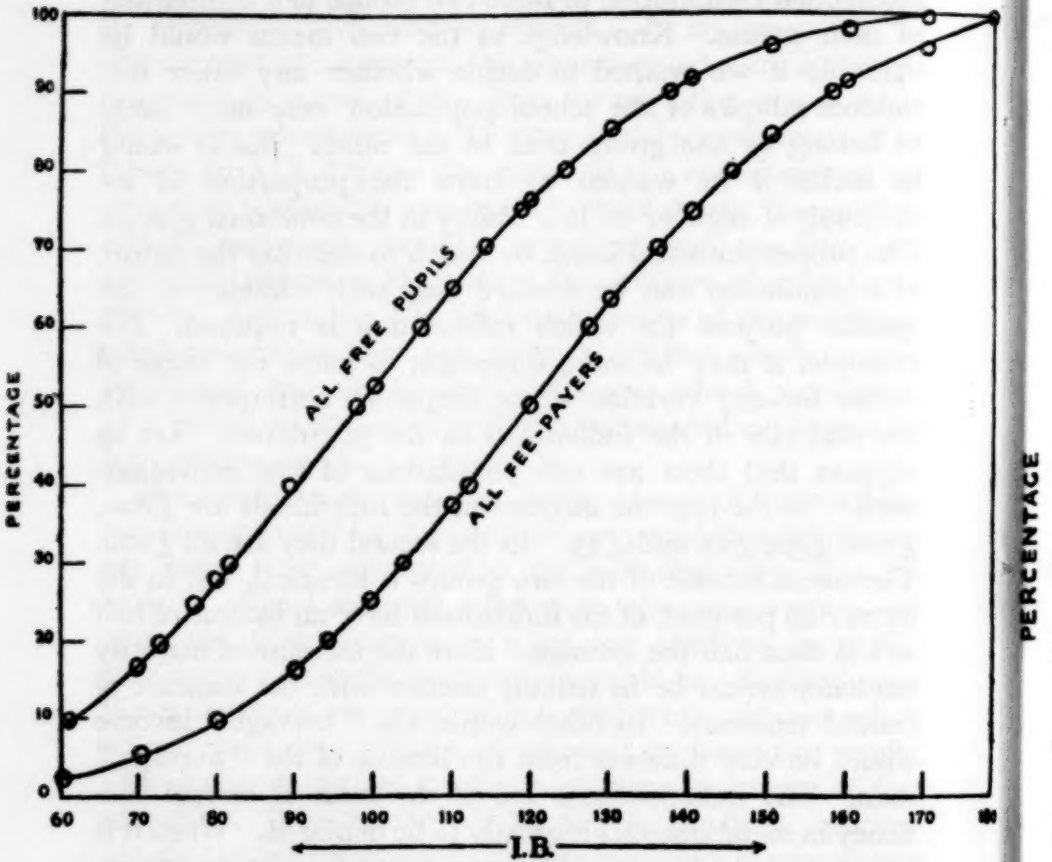


FIG. 1.

true value, when a series of measurements is made of the same variable in a single individual, and when the deviation of the measurements from the mean corresponds to what would be likely to happen if they had occurred by chance. It is no doubt sufficiently remarkable that the distribution of I.Q.s in a large sample of individuals should so often approximate to the curve of error, but this fact affords no ground for

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believing that there is a "true" value for the I.Q. of a group in the sense that there is a true value for the height of a mountain. Indeed, this would be a meaningless statement,

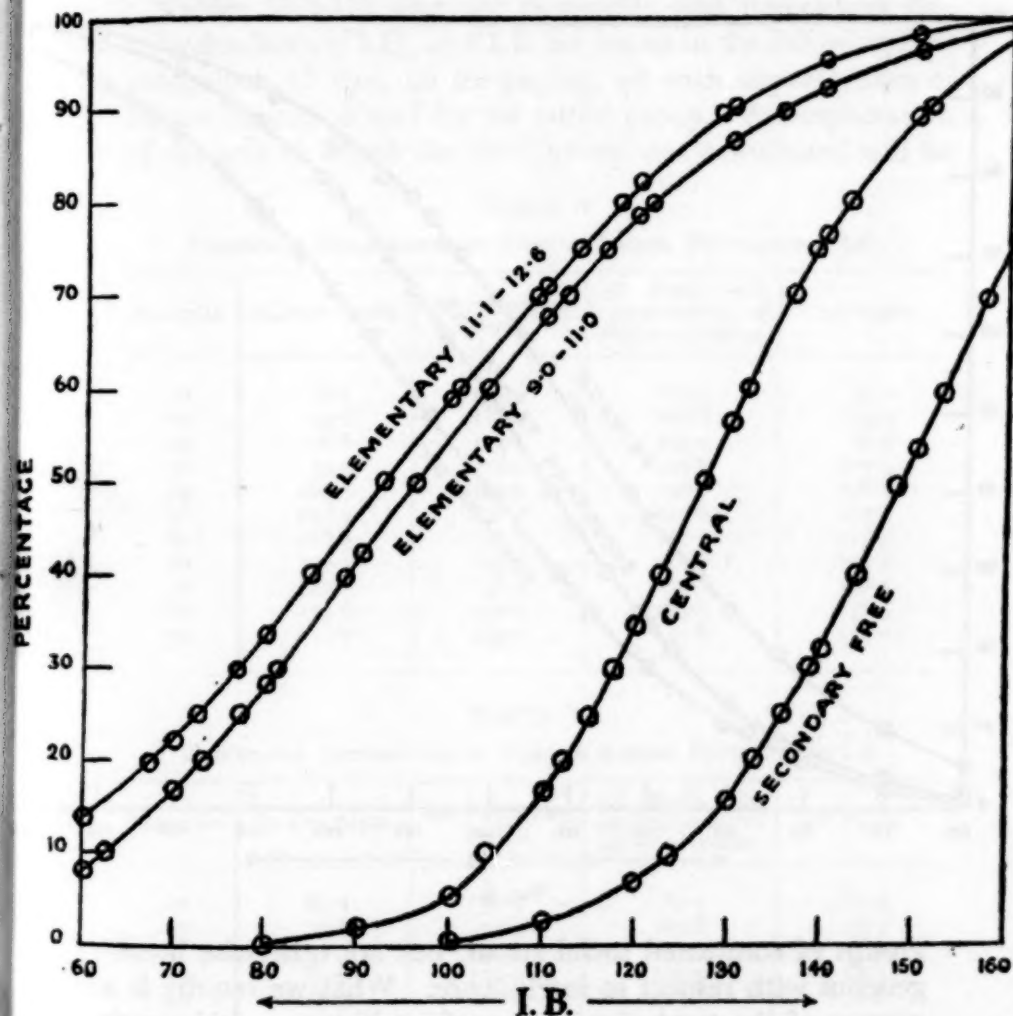


FIG. 2.

unless the group were completely homogeneous with respect to intelligence. Perhaps the temptation to believe that different racial or social groups are genetically homogeneous

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with respect to intelligence helped to encourage the habit of regarding mean differences with superstitious awe. In our case we are comparing the distribution of intelligence in two

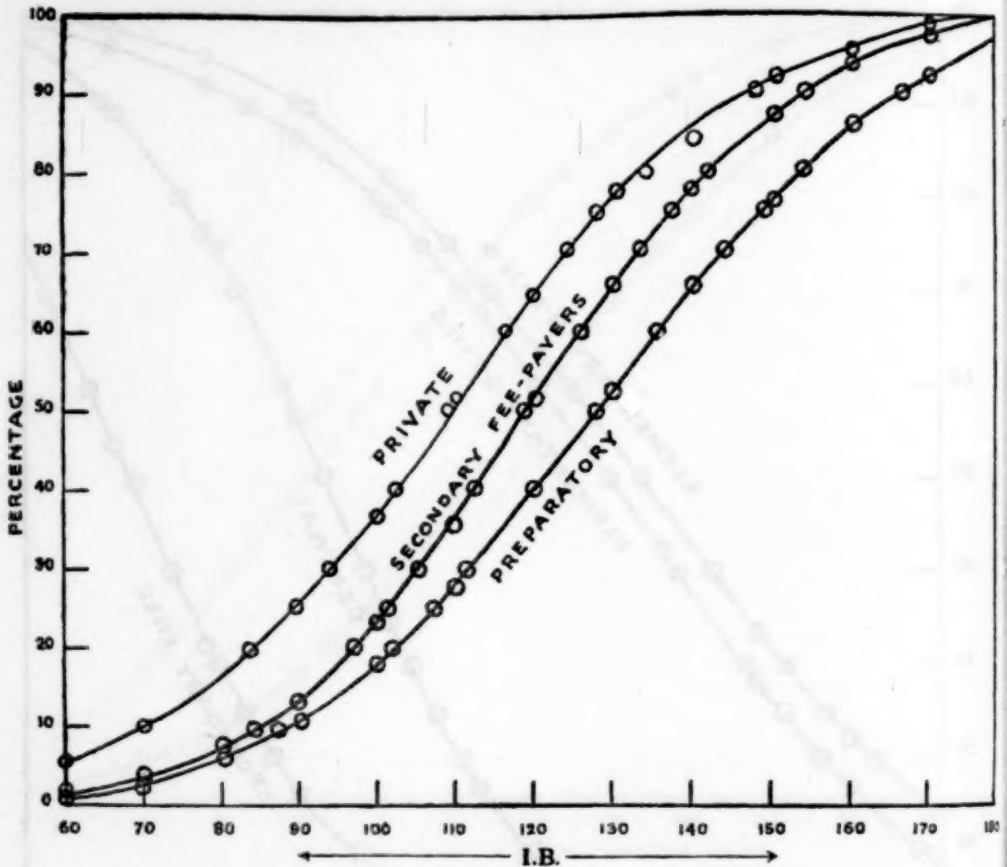


FIG. 3.

groups of contrasted social status, but not otherwise homogeneous with respect to intelligence. What we require is a picture of the total distribution of intelligence within each group, so that we can measure the extent of the resemblance and the difference between the two.

These considerations have led us to prefer to set out the differences between the intellectual composition of the two

ABILITY AND OPPORTUNITY

groups of free and fee-paying pupils in terms of their percentile distribution of I.Q. and I.B. and of the percentages in each group who attain a given level of intelligence.

Tables V-VIII give the percentile and percentage distribution both of I.Q. and I.B. for pupils in the following four categories: all free, all fee-paying, all with opportunities of higher education and for the entire group. An explanation of the way in which the third group was constituted will be

TABLE V
PERCENTILE DISTRIBUTION OF VARIOUS SCHOOL POPULATIONS—I.Q.

Percentile.	All Free Pupils.	All Fee-paying Pupils.	All Pupils with opportunities of higher education.	All Pupils.
10	86.5	100.0	105.8	87.0
20	93.6	110.2	118.8	94.3
25	96.6	114.1	123.4	97.3
30	99.5	118.1	127.8	100.5
40	105.7	124.7	136.6	106.8
50	111.9	131.2	142.8	113.3
60	118.4	139.0	147.3	119.8
70	126.1	145.4	151.6	127.8
75	130.3	148.5	153.6	132.3
80	135.6	152.0	155.6	137.5
90	147.7	159.8	159.6	149.2

TABLE VI
PERCENTILE DISTRIBUTION OF VARIOUS SCHOOL POPULATIONS—I.B.

Percentile.	All Free Pupils.	All Fee-paying Pupils.	All Pupils with opportunities of higher education.	All Pupils.
10	61.2	80.3	89.1	61.9
20	72.8	94.3	104.6	73.7
25	77.3	100.0	110.5	78.4
30	81.6	104.1	115.4	82.7
40	89.3	112.2	124.7	90.8
50	97.7	119.7	133.0	99.4
60	105.9	127.4	140.6	107.5
70	114.3	135.9	147.6	116.1
75	118.8	140.5	151.4	120.6
80	124.1	145.5	155.5	126.0
90	137.4	158.2	165.9	139.4

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TABLE VII

PERCENTAGE DISTRIBUTION OF VARIOUS SCHOOL POPULATIONS—I.Q.

I.Q.	All Free Pupils	All Fee-paying Pupils.	All Pupils with opportunities of higher education.	All Pupils.
190-9	—	0.2	0.1	—
180-9	0.4	0.9	0.6	0.4
170-9	0.7	2.7	1.8	0.8
160-9	2.2	5.9	6.5	2.5
150-9	5.0	12.8	25.0	5.6
140-9	7.6	16.1	22.1	8.3
130-9	9.4	12.9	11.3	9.6
120-9	12.2	16.1	11.6	12.5
110-19	15.5	12.7	8.4	15.3
100-9	16.2	9.8	6.3	15.7
90-9	16.9	6.6	4.2	16.2
80-9	11.1	2.8	1.8	10.5
70-9	2.6	0.5	0.3	2.5
60-9	0.1	0.1	0.1	0.1

TABLE VIII

PERCENTAGE DISTRIBUTION OF VARIOUS SCHOOL POPULATIONS—I.B.

I.B.	All Free Pupils.	All Fee-paying Pupils.	All Pupils with opportunities of higher education.	All Pupils.
200-9	—	0.1	—	—
190-9	0.1	0.4	0.6	0.1
180-9	0.2	1.5	1.9	0.3
170-9	0.3	2.5	4.2	0.5
160-9	1.2	4.2	7.8	1.4
150-9	2.4	6.8	12.1	2.7
140-9	4.2	9.9	14.2	4.6
130-9	6.4	11.1	13.0	6.7
120-9	8.9	13.0	11.6	9.2
110-19	11.2	13.3	10.0	11.4
100-9	12.4	12.1	8.4	12.4
90-9	11.8	8.9	5.8	11.6
80-9	13.0	6.4	4.1	12.5
70-9	11.0	4.5	2.9	10.5
60-9	7.9	2.7	1.7	7.5
50-9	5.6	1.4	0.9	5.3
40-9	2.1	0.9	0.6	2.0
30-9	0.9	0.3	0.2	0.9
20-9	0.3	0.1	—	0.3
10-19	0.1	—	—	0.1

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found in Section VI. As shown in item 7 of Table X, it consists of all private and preparatory pupils plus actual and potential free and fee-paying secondary school pupils of

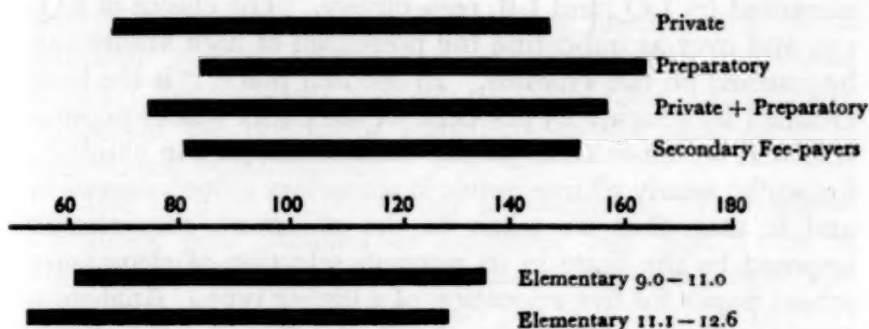


FIG. 4.

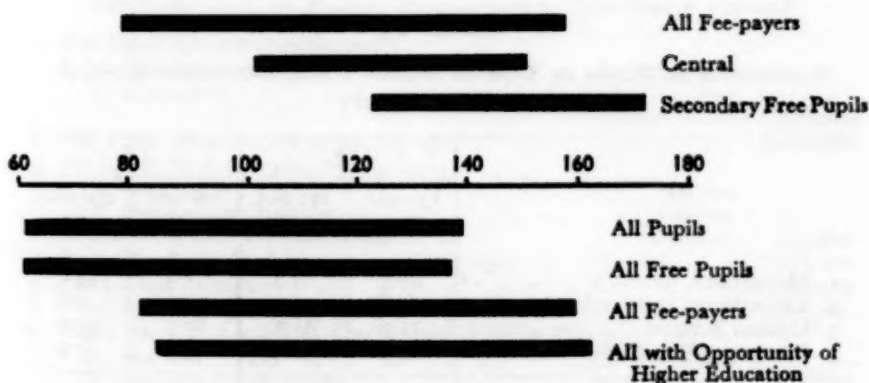


FIG. 5.

INDEX OF BRIGHTNESS

RANGE OF MIDDLE 80 PER CENT OF VARIOUS SCHOOL POPULATIONS

elementary school origin. On the basis of the calculated total, the numbers corresponding to the percentage distribution of intelligence in the constituent populations were added together for each level of I.Q. and I.B. and a combined per-

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centage and percentile distribution determined for the group as a whole.

Table IX shows the percentages in the various school populations who attain or exceed two levels of intelligence measured by I.Q. and I.B. respectively. The choice of I.Q. 130 and over as indicating the possession of high ability can be justified on two grounds. In the first place, it is the level attained by roughly 25 per cent. of the entire school population and by more than 50 per cent. of fee-paying children. Secondly, nearly all free pupils in secondary schools exceed it, and it may thus be taken as the minimum requirement imposed by the State in its rigorous selection of elementary school pupils for free education of a higher type. Analogous considerations apply to the choice of I.B. 120. We supply also data based on the figures of I.Q. 140 and I.B. 130, in order to provide an alternative criterion of exceptional ability.

TABLE IX

PERCENTAGE OF PUPILS IN VARIOUS SCHOOL POPULATIONS AGED 9.0-12.6
WITH HIGH ABILITY

	I.Q.		I.B.	
	130 and over.	140 and over.	120 and over.	130 and over.
1. Elementary, 9.0-11.0 . . .	21.4	13.3	21.2	13.1
2. Elementary, 11.1-12.6 . . .	21.8	11.4	17.6	9.4
3. Central Schools . . .	71.7	51.6	65.5	43.5
4. Secondary Free Pupils . . .	95.3	86.7	93.3	84.2
5. Secondary Fee-payers . . .	51.7	37.1	48.7	34.3
6. Private Schools . . .	37.0	25.0	35.5	22.7
7. Preparatory Schools . . .	61.8	49.6	60.1	47.7
8. Private and Preparatory Schools (combined) . . .	51.2	39.1	49.5	37.0
9. All Free Pupils . . .	25.3	15.9	23.7	14.8
10. All Fee-paying Pupils . . .	51.5	38.6	49.6	36.6
11. All with Opportunities of Higher Education . . .	67.4	56.1	65.4	53.8
12. All . . .	27.2	17.6	25.5	16.3

ABILITY AND OPPORTUNITY

VI. THE MEASUREMENT OF EDUCATIONAL OPPORTUNITY

We are now in a position to attempt an estimate of the total volume of high ability in the school population, of the character of its distribution amongst different social groups and of the extent to which the existing machinery of social selection adjusts educational opportunity to individual ability. We proceed further to offer some quantitative indices of the prevailing inequality in the assignment of educational opportunities.

Table IX gave the percentage of children in various school categories who attained or exceeded two high levels of ability. We have now to translate these percentages into actual numbers. In order to do this it is first necessary to determine the total size of these categories, which is done in Table X.

TABLE X

ESTIMATED SIZE OF SCHOOL POPULATIONS IN AGE GROUP 9.0-12.6

1. <i>Free Pupils</i> (present constitution):		
(a) Elementary	2,305,000	
(b) Secondary	41,000	
		2,346,000
2. <i>Free Pupils</i> (constitution at leaving age)		2,286,000
3. <i>Fee-paying Pupils</i> (present constitution):		
(a) Secondary	65,000	
(b) Private and Preparatory	150,000	
		215,000
4. <i>Fee-paying Pupils</i> (constitution at leaving age)		275,000
5. <i>Total School Population</i>		2,561,000
6. <i>Total Population of Elementary School Origin</i>		2,377,000
7. <i>Pupils who have or will have Opportunities of Higher Education:</i>		
(a) Secondary Free	158,000	
(b) Secondary Fee-payers	125,000	
(c) Private and Preparatory	150,000	
		433,000
8. <i>Pupils who go or will go to Central Schools</i>		252,000

The figures in items 1, 3 and 5 are taken directly from official sources. Items 2 and 4 express the numbers who will be free and fee-paying pupils at the time of leaving school, i.e. after allowance has been made for those elementary school children who, at various ages, will become fee-payers at secondary

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schools. We estimate them to be 60,000 by an application of the argument described below (p. 145). Item 6 was obtained by adding to the existing elementary school population those secondary school children who have originated in elementary schools. We know the number of secondary free pupils of elementary school origin, and we make the assumption that 50 per cent. of the fee-payers within our age group also come from elementary schools, since this is approximately true for fee-payers of all ages. Item 8 presented greater difficulty. Central schools are not separately distinguished in official returns from other types of public elementary schools. We relied in the first place on figures specially furnished to us by the Education Officer of the L.C.C. These gave us the total central school population in London in the age group 11-12 years. Reference to the total London population of elementary school origin at the same age enables us to estimate that approximately 12.3 per cent. of all such children proceed to central schools at that age. It follows, in the absence of any change in the number of central school places, that a similar proportion of the age group 9-11 would normally proceed to central schools on reaching the age of admission. Assuming that the same proportion exists for England and Wales, we arrive for children aged 9 and over at a figure of 252,000 with opportunities of a central school education. Since, in fact, we have no information concerning the comparative distribution of the elementary school population between central and other types of schools outside London, this estimate must be taken with considerable reserve.

Item 7 is of critical importance in the present discussion and requires very careful treatment. It will be noted that in Table IX the category entitled All with Opportunities of Higher Education has already appeared.

By higher education we mean education continuing beyond the primary or preparatory stage into the secondary or public school. What number of individuals enjoy a higher education in the sense defined, or may expect to do so when they

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reach the appropriate age? We assume that all children in private, preparatory and secondary schools fall into this category. Not all necessarily remain at school or go on to the university, but the normal expectation is that such children enjoy at least some educational and social advantages not possessed by those who finish their education in the elementary school. There is no means of estimating the average length of the school life of private and preparatory school pupils, but we do know, in the case of secondary school pupils, that they spend on the average about five years in the secondary school and that the average age of leaving is just under 17 years. We also know that more than 50 per cent. remain at school after the age of 16. It is common knowledge that attendance at schools of this type, even when incomplete, carries with it a considerable prestige value in the outside world.

The paucity of official information respecting children in private and preparatory schools makes it impossible to determine with any accuracy the total numbers within our age range of 9.0-12.6. On the assumption that the proportion of such children in this age group to the estimated total aged 5-14 is the same as in the case of elementary school children, where the total is known, we arrive at a figure of approximately 150,000.

The calculation of the number of children who will proceed to secondary schools, while resting on official returns, is nevertheless a task of considerable complexity. It is necessary for our purpose to calculate the total numbers who will have the *opportunity* of a higher education. We know the numbers of both free pupils and fee-payers aged 9.0-12.6 who are actually in attendance at secondary schools. We have also to estimate the number of individuals who are not yet at secondary schools, but may expect to proceed there at a later date. Since we do not propose to separate in the final result children receiving a higher education in different types of schools, we need only consider transferences from public elementary schools. Those entering secondary schools from

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elsewhere are necessarily included in our total of private and preparatory school children.

The obvious method of arriving at such a figure would seem to be to obtain the proportion of children leaving elementary schools for secondary schools at all ages to the total number of elementary school leavers, on the basis of figures for any given year or series of years, and thus the total number in any given age group. This was in essence the method adopted by Carr Saunders and Jones in 1927, using figures relating to the years 1922-5. Their procedure is satisfactory as long as there are no great fluctuations in the total number of leavers in successive years. Since 1927, however, the requisite constancy of the number of leavers per annum has not persisted. For example, in the year 1931-2, on which the estimates in this investigation are based, the population in the age group 14-15, which contains the majority of leavers, is unusually small on account of the great decline in the birth-rate that occurred during the war. The figure is 539,000 as compared with 529,000 in the age group 13-14, 741,000 in the age group 12-13 and 768,000 in the age group 11-12. Hence the total number of leavers in the two years subsequent to 1933 would be approximately two-fifths greater than for the year 1931-2. The proportion of leavers who went to secondary schools would be artificially inflated, if account were taken only of years in which the total school population over the age of 11 was unusually small. For these reasons we were compelled to seek an alternative method of obtaining the required information.

It is possible to calculate the *proportion* of all children in elementary schools over the age of 9 who will eventually go to secondary schools, on the assumption that the proportion of admissions to secondary schools at each year of age to the total elementary school population at the same age remains constant. With few exceptions, the minimum age of transference from elementary to secondary schools is 9 and the maximum 14. Hence this method only involves a sum-

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mation of the proportions admitted at different years of age between 9 and 14. We have calculated free and fee-paying pupils separately.

(a) *Secondary Free Pupils*.—Let the 1931-2 age group of children of elementary school origin aged 9-10 be N_{9-10} , the admissions to secondary schools of free pupils from elementary schools at the age of 9-10 be Y_1 . Then $P_1 = \frac{Y_1}{N_{9-10}}$, where P_1 is the proportion of such admissions to the total age group of elementary school origin (i.e. including children already gone to secondary schools as free pupils or fee-payers).¹ Similarly, if the admissions for the age groups 10-11, 11-12, 12-13 and 13-14 be Y_2, Y_3, Y_4 and Y_5 , then—

$$P_2 = \frac{Y_2}{N_{10-11}}$$

$$P_3 = \frac{Y_3}{N_{11-12}}$$

$$P_4 = \frac{Y_4}{N_{12-13}}$$

$$P_5 = \frac{Y_5}{N_{13-14}}$$

Let P be the proportion of all children aged 9 and over who will eventually go to secondary schools as free pupils, then—

$$\begin{aligned} P &= P_1 + P_2 + P_3 + P_4 + P_5 \\ &= \frac{102}{630,801} + \frac{5,582}{685,857} + \frac{31,532}{728,893} + \frac{7,342}{661,778} + \frac{1,342}{484,394} \\ &= 0.02\% + 0.81\% + 4.33\% + 1.11\% + 0.28\% \\ &= 6.6\%. \end{aligned}$$

Since the total population of elementary school origin aged 9.0-12.6 is 2,377,000, the number who may hope to obtain

¹ The more rigorous form of this method would be to take $N_{10-11}, N_{11-12}, N_{12-13}$ and N_{13-14} as the size of these age groups when each of them was at the minimum age of 9-10, i.e. ${}_{9-10}N_{1930-31}, {}_{9-10}N_{1931-32}$, etc. This would lead to virtually the same result as that given above, since the depletion of the age groups between 9 and 14 by mortality or emigration is insignificantly small.

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free places in secondary schools is approximately 157,000. Since also the great majority of transferences from elementary to secondary schools of free pupils takes place within this age range, we can provisionally estimate that between 6 and 7 per cent. of children starting life in the public elementary school enjoy the opportunity of a higher education, the cost of which is defrayed either wholly or in part by the State or other public authority.

(b) *Secondary Fee-payers*.—Similarly, we have calculated the percentage of individuals of elementary school origin who will eventually proceed to secondary schools as fee-payers to be 3.9 per cent. and the total number approximately 93,000. The combined percentage relating to free pupils and fee-payers is 10.5 and the total number within our age group, 251,000.

By this means we obtained the figures for item 7 of Table X. It remained only to add to the totals of children proceeding to secondary from elementary schools as free or fee-paying pupils those originating in schools of other types. On March 31, 1932, there were about 3 per cent. of all free pupils

TABLE XI

COMPARISON OF VARIOUS SCHOOL POPULATIONS AGED 9.0-12.6 (IN PERCENTAGES)

1. *As Percentage of Total School Population :*

(a) All Free Pupils:	
(i) Present constitution	91.6
(ii) Constitution at leaving age	89.3
(b) All Fee-paying Pupils:	
(i) Present constitution	8.4
(ii) Constitution at leaving age	10.7
(c) All Pupils with Opportunities of Higher Education	16.9

2. *As Percentage of All Pupils of Elementary School Origin :*

(a) Pupils of Elementary School Origin with Opportunities of obtaining Free Places in Secondary Schools	6.6
(b) Pupils of Elementary School Origin with Opportunities of proceeding to Secondary Schools as Fee-paying Pupils	3.9
(c) (a) + (b)	10.5
(d) Pupils who go or will go to Central Schools	12.3

3. *As Percentage of All Free Pupils :*

(a) All Fee-paying Pupils:	
(i) Present constitution	9.2
(ii) Constitution at leaving age	12.0

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in secondary schools, or 1,230, who had come from private or preparatory schools and approximately 32,000 fee-payers. It was necessary only to take account of such individuals in actual attendance at secondary schools: those who will eventually proceed there are already included in the total of private and preparatory school children.

Table XI expresses in terms of percentages the relationship between some of the totals given in Table X.

VII. THE VOLUME AND DISTRIBUTION OF HIGH ABILITY

Table IX shows the proportion of pupils in various categories of the school population who attain or exceed four different levels of high ability, ranging between a lower limit of I.Q. 130 and an upper limit of I.B. 130. While a substantial percentage in both the free and fee-paying groups achieve the selected standards, it will nevertheless be observed that there is a striking discrepancy between the two figures, which confirms the disparity between the mean values already noted. We may repeat that it is not the purpose of this investigation to determine whether this superiority of the fee-paying group is due to nature or nurture. The assumptions we adopt are decidedly conservative in that we do not take into account any possible improvement in the intellectual performance of children of elementary school origin, that might result from a diminution of existing economic and cultural inequalities.

Before proceeding to the discussion of the major issues, we venture to draw attention to several points of detail that arise from a study of this table. It will be noted that according to the criterion employed not less than 84 per cent. nor more than 95 per cent. of all free pupils in secondary schools possess high ability. This may be held to illustrate the way in which existing scholarship examinations are successful in excluding children of comparatively low ability. As Table IX shows, it does not mean that they have as their object the selection of all gifted children of elementary school origin.

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For example, the significantly high proportion of between 43 and 72 per cent. of all pupils in central schools possess superior ability. Nevertheless, very few of them may hope to proceed to secondary schools either as free pupils or as fee-payers. Again, of the residual population in the elementary schools, i.e. those who have failed to be selected either for central or secondary schools at the ages at which the overwhelming majority of transfers occur, between 9 and 22 per cent. fall within our category of gifted children. In their case also, only an insignificant proportion have any subsequent opportunity of proceeding at a later age to any other kind of school.

Within the fee-paying group itself there are highly significant differences. The superiority of the preparatory school children is in bold contrast with the inferiority of children attending private schools. It will be recalled that in the absence of even approximate official estimates concerning the relative proportion of preparatory and private school children in the country as a whole, we were compelled, in calculating the intellectual indices of the combined group, to assume that the two populations were of equal size. It is obvious that the combined mean and the proportion of high ability for the fee-paying group as a whole would be significantly lower, were there any great superiority in the relative size of the private school population. We have argued in a preceding section that this is almost certainly true. In that event the discrepancy between the ability of the two social groups distinguished in this investigation would be less and the inequality of their educational opportunities greater. Thus again our data incline to the side of conservatism.

Table XII presents the prime data of Table IX, the percentage figures having been converted into actual numbers on the basis of the data set out in Table X. Table XII also shows the percentage contribution of each group to the total school population of high ability. Table XIII continues the analysis of the data classified according to the further requirements of this investigation.

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TABLE XII
ESTIMATED TOTALS WITH HIGH ABILITY IN VARIOUS SCHOOL CATEGORIES, AGED 9.0-12.6, WITH PERCENTAGES
OF EACH IN TERMS OF TOTAL SCHOOL POPULATION WITH HIGH ABILITY

School.	I.Q.				I.B.			
	130 and over.		140 and over.		120 and over.		130 and over.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Elementary, 9.0-11.0	279,000	39.2	174,000	37.9	277,000	42.0	171,000	40.5
Elementary, 11.1-12.6	190,000	26.7	100,000	21.8	154,000	23.4	82,000	19.4
Central	92,000	12.9	66,000	14.4	84,000	12.7	56,000	13.3
Secondary Free Pupils	39,000	5.5	36,000	7.8	38,000	5.8	35,000	8.3
Secondary Fee-payers	34,000	4.8	24,000	5.2	32,000	4.8	22,000	5.2
Private and Preparatory	77,000	10.8	59,000	12.9	74,000	11.2	56,000	13.3
Total with High Ability	711,000	100.0	459,000	100.0	659,000	100.0	422,000	100.0

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TABLE XIII
ESTIMATED TOTALS WITH HIGH ABILITY IN VARIOUS CATEGORIES OF THE SCHOOL POPULATION, AGED
9.0-12.6, AND PERCENTAGES OF EACH IN TERMS OF TOTAL SCHOOL POPULATION WITH HIGH ABILITY

	I.Q.			I.B.		
	130 and over.		140 and over.	120 and over.		130 and over.
	No.	Per cent.	No.	No.	Per cent.	No.
Total with High Ability . . .	711,000	100.0	459,000	659,000	100.0	422,000
All Free Pupils . . .	600,000	84.4	376,000	553,000	83.9	344,000
All Fee-paying Pupils . . .	111,000	15.6	83,000	106,000	16.1	78,000
All who will leave as Free Pupils . .	569,000	80.0	353,000	523,000	79.4	323,000
All who will leave as Fee-payers . .	142,000	20.0	106,000	136,000	20.6	99,000
All in Elementary (including Central) Schools . . .	561,000	78.9	340,000	515,000	78.1	309,000
All in Secondary, Private and Pre- paratory Schools . . .	150,000	21.1	119,000	144,000	21.9	113,000
All Pupils with Opportunities of Higher Education . . .	293,000	41.2	243,000	283,000	42.9	232,000
All Pupils without Opportunities of Higher Education . . .	418,000	58.8	216,000	376,000	57.1	190,000
All Pupils who go or will go to Central Schools . . .	181,000	25.5	130,000	165,000	25.0	110,000
						26.1

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The most striking conclusion that emerges from a study of these tables is that there is no shortage of gifted children in the community. Our figures, we may recall, refer only to a restricted age group. On the assumption that the percentile distribution of I.Q. and I.B. would be the same at all ages of school life, it would be possible to estimate the corresponding figures for the entire population of school age. The figures given here themselves suffice to show, when compared with those in Table X, a large reservoir of unutilized high ability. The argument from the discrepancy between the mean ability and between the relative proportions of gifted children in schools of different social type is seen to lose much of its practical significance. It is overwhelmed by the enormously greater actual numbers of superior children who originate in elementary schools. We are far from suggesting that the inferiority of the mean intelligence of the children of the relatively poor does not create a problem which calls for immediate investigation. For the present discussion the relevant fact is that on their observed performances alone the comparatively poor very greatly preponderate in the production of individuals of high ability. That being so, it follows that an educational policy concerned with the training of a sufficient number of children to supply the social demand for highly educated persons will be mainly directed to the provision of adequate facilities for the higher education of children of elementary school origin.

When we compare present free with present fee-paying pupils, we find that the former contain between four and five times as many gifted children as the latter. Similarly, when we consider the status of children at the time of leaving school, we note that there are three or four times as many gifted free pupils as gifted fee-paying pupils. It will not fail to be observed that in the single case of children whose educational future is limited to the central school there are many more superior individuals than in the entire group of fee-paying pupils. Yet practically none of these has the

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opportunity of entry into the professions and the higher ranks of the business world enjoyed by those who have attended fee-paying schools.

The most unexpected and disturbing result of the analysis in Table XIII is that on the highest criterion of ability 45 per cent. and on the lowest 59 per cent. of the total number of gifted children in the school population do not enjoy the opportunity of a higher education. None of these belong to the group whose parents are able and willing to pay fees for their children's education. The entire mass of unutilized talent consists of children for whose education the requisite financial provision from public funds is not available.

VIII. THE MALADJUSTMENT OF ABILITY AND OPPORTUNITY

In order to obtain a clear picture of the existing disparity with reference to differences of ability and of opportunity, it has been necessary to adopt certain arbitrary levels of ability as a basis for comparison. For example, we noted that an I.Q. of 130 is the figure reached by approximately 25 per cent. of the total school population. If we have regard only to these arbitrary levels, then for the purpose of the present discussion we can speak of maladjustment as occurring (a) when individuals who attain or exceed them do not have the opportunity of higher education, and (b) when individuals who fail to attain them nevertheless receive a higher education. It must be clearly understood that there is no justification for the assertion that only children with intelligence above these levels can *benefit* from higher education. This investigation is in no way concerned with the problem of deciding in what different senses the term "benefit" may be legitimately employed in the discussion of educational policy. It aims only at bringing into relation objective criteria of educational performance and quantitative indices of educational opportunity.

Table XIV describes the way in which the existing facilities

TABLE XIV
MALADJUSTMENT OF ABILITY AND OPPORTUNITY IN HIGHER EDUCATION
(Age Group 9.0-12.6)

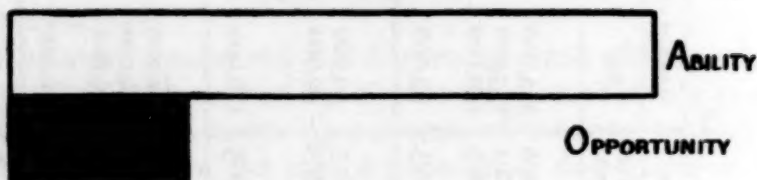
I.Q. I.B.

	130 and over.		140 and over.		120 and over.		130 and over.	
	No.	Per cent. ¹	No.	Per cent. ¹	No.	Per cent. ¹	No.	Per cent. ¹
1. <i>Free Pupils</i> [2,286,000]:								
(a) No. with high ability of .	569,000	24.9	353,000	15.4	523,000	22.9	323,000	14.1
(b) No. of (a) <i>with</i> opportunity .	151,000	6.6	137,000	6.0	147,000	6.4	133,000	5.8
(c) No. of (a) <i>without</i> opportunity .	418,000	18.3	216,000	9.4	376,000	16.5	190,000	8.3
(d) No. with opportunity but without high ability .	7,000	0.3	21,000	0.9	11,000	0.5	25,000	1.1
2. <i>Free-paying Pupils</i> [275,000]:								
(a) No. with high ability of .	142,000	51.5	106,000	38.5	136,000	49.5	99,000	36.0
(b) No. of (a) <i>with</i> opportunity .	142,000	51.5	106,000	38.5	136,000	49.5	99,000	36.0
(c) No. of (a) <i>without</i> opportunity .	—	—	—	—	—	—	—	—
(d) No. with opportunity but without high ability .	133,000	48.5	169,000	61.5	139,000	50.5	176,000	64.0
3. <i>All Pupils</i> [2,561,000]:								
(a) No. with high ability of .	711,000	27.8	459,000	17.9	659,000	25.7	422,000	16.5
(b) No. of (a) <i>with</i> opportunity .	293,000	11.5	243,000	9.5	283,000	11.0	232,000	9.1
(c) No. of (a) <i>without</i> opportunity .	418,000	16.3	216,000	8.4	376,000	14.7	190,000	7.4
(d) No. with opportunity but without high ability .	140,000	5.5	190,000	7.4	150,000	5.9	201,000	7.8
4. <i>Total Maladjustment</i> (3c + 3d) .	558,000	21.8	406,000	15.9	526,000	20.5	391,000	15.2

¹ The percentages refer to the relation between the figures in the rows and the figures in square brackets in column 1.

I.Q. 130

FREE PUPILS



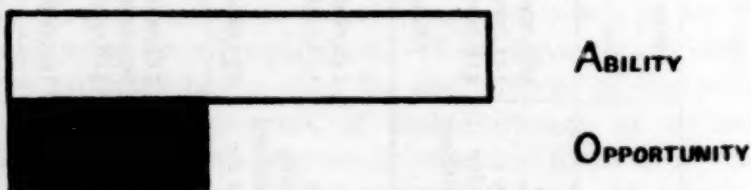
FEE-PAYING PUPILS



FIG. 6.

I.B. 130

FREE PUPILS



FEE-PAYING PUPILS



FIG. 7.

Comparison of total numbers with ability and numbers who have opportunity of higher education in the two groups of free and fee-paying pupils respectively (based on data of Table XIV). It should be noted that Figs. 6 and 7 are not drawn to the same scale.

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for higher education are distributed between the two social groups and between those individuals who possess high ability and those who do not.¹

For example, 569,000, or 25 per cent., of all children who will leave as free pupils attain or exceed an I.Q. of 130. The number of such gifted children who actually enjoy the opportunities of a higher education is only 151,000 or 26.5 per cent.,² while those who have the ability but are not afforded the opportunity number 418,000 or 73.5 per cent. Thus the wastage of talent from this source alone is nearly three times the total that is at present utilized, or 16.3 per cent. of the total school population. In addition, a maladjustment of a different kind takes place when children who fail to attain the selected levels of high ability receive higher education. Seven thousand, or 0.3 per cent., of children of elementary school origin fall into this category. This percentage is not greater than would be expected when individuals are selected mainly as a result of a mass examination. The corresponding maladjustment in the case of fee-paying pupils amounts to no less than 133,000, or 49 per cent., of the entire population

¹ Slight discrepancies will be noted between comparable percentage figures in Tables IX and XIV. The data of Table IX were calculated directly from the distributions of I.Q. and I.B. in our samples of various populations, the weights employed being taken generally as whole numbers. When translated into actual numbers they are taken correct to the nearest thousand. The percentages in Table XIV express the relation of these round numbers to the *estimated* total size of various educational categories. The discrepancies are insignificant and do not affect the order of magnitude of the differences disclosed in the argument that follows.

² Dr. Robert R. Rusk, in an article on the recent "Mental Survey of Scottish Children" (*The Year Book of Education*, 1935), estimates that on certain assumptions 28 per cent. of Scottish children aged 11 may be said to have I.Q.s of over 110. He goes on to say that "from the little data we have we can infer that they might proceed to secondary education in Scotland." While the actual value of the constants denoting I.Q. cannot usefully be compared, for reasons stated in Section III of this study, it is interesting to notice that Rusk's figure is in relatively close agreement with our figure of 27.2 per cent. for the proportion of London children aged 9.0-12.6 who attain an I.Q. of 130 or more. We have remarked that this level may be regarded as the minimum qualification for free pupils in London secondary schools. We may express the hope that the Scottish Council for Research in Education will analyse the data at its disposal to show what proportion of this 28 per cent. of superior individuals does in fact proceed to secondary schools in Scotland.

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of fee-paying pupils. Thus the overwhelming majority of sub-standard children who nevertheless obtain a higher education consists of fee-paying pupils. The final conclusion, taking I.Q. 130 as our criterion of ability, is that there are 558,000 individuals, or 22 per cent. of the entire school population, aged 9.0-12.6 in whose case there is a maladjustment of ability and opportunity of one kind or the other. This total is considerably in excess of the total number who actually enjoy opportunities of higher education (irrespective of ability) and twice as great as the number of such children who also attain our selected levels of high ability.

There are other levels of ability which could be employed with equal justification. The figures given in the tables were obtained by calculation. It is also possible to use the method of graphical interpolation from the curves of the distribution of intelligence and so obtain rough estimates of the maladjustment that occurs when other levels are selected. Figures 1, 2 and 3 show the curves of the distribution of I.B. for various school populations. It will be seen that 25 per cent. of fee-payers have an I.B. of less than 100. This level, however, is exceeded by 94 per cent. of children in central schools. Hence, if we assume that 25 per cent. of children who have access to a higher education by virtue of their parents' means are below the required level, then 95 per cent. of children in central schools alone are above it, none of whom will receive a higher education. Likewise, if we assume that only 10 per cent. of fee-payers are uneducable in this sense, which would mean that they failed to reach an I.B. of 80, it may be argued that the 72 per cent. of free pupils who exceed this level ought to receive a higher education. In fact, only 10.5 per cent. will receive it either as scholarship children or as fee-payers in secondary schools.

While the preponderance of State-assisted pupils among those of comparatively high ability is not surprising, it is less commonly recognized that they also provide the majority of individuals of exceptional intelligence. Dr. Cyril Burt, in a

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widely quoted estimate, defines the latter as the highest, 0.1 per cent. of the population. It is not necessary to adopt the American ascription of "genius" to such individuals in order to believe that they are of unusual value to the community. According to Burt's view, not based, as far as we know, on a comparative study of children from different social strata, "these are rarely found in elementary schools; and are almost entirely confined to the families from the higher social and professional classes." Our data confirm neither of these statements. The present study shows that more than two-thirds of the number of individuals at this level of ability originate within the public elementary school. Of these no less than 70 per cent. are of wage-earning parentage. Taking schools of every social type, we find that the "higher social and professional classes" contribute only 33 per cent. of the total of exceptional children, while wage-earners are responsible for 50 per cent. The rest come from the shop-keeping and clerical and commercial classes.

Burt further states that the majority of those who constitute the top 1 or 2 per cent. of the elementary school population win scholarships to secondary schools. In the present investigation the top 1.6 per cent. of the elementary school population aged 9.0-11.0 attain an I.B. of 160 or over. Of these only 50 per cent. become free pupils in secondary schools. He goes on to say that the next 10 per cent. are in London usually drafted to central schools. According to our data the next 11.5 per cent. have an I.B. between 130 and 160. In fact, more than 50 per cent. of these do not proceed to central schools.

It can at once be remarked that a very considerable discrepancy appears between the two social groups when we consider individuals in whose case there exists a maladjustment between ability and opportunity. Table XV attempts to measure the amount of this disparity.

In the case both of free and fee-paying pupils the numbers with opportunities of further education irrespective of ability

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TABLE XV

MEASURES OF SOCIAL INEQUALITY IN EDUCATIONAL OPPORTUNITY—I
(The figures refer to pupils who will leave school as Free or Fee-paying Pupils)

	I.Q.		I.B.	
	130 and over.	140 and over.	120 and over.	130 and over.
1. <i>Percentage of Pupils with Opportunities of Higher Education to Total Number with High Ability :</i>				
(a) Free Pupils . . .	27.8	44.8	30.2	48.9
(b) Fee-paying Pupils .	193.6	259.4	202.2	277.8
2. <i>Inequality of Opportunity : [Proportion of (a) to (b)] .</i>	1 : 7.0	1 : 5.8	1 : 6.7	1 : 5.7

have been expressed as a percentage of the total number with high ability. The ratio of the two figures thus obtained affords an index of the inequality in the distribution of educational opportunities between the two social groups. Thus, according as we take the upper or the lower limit of high ability, an able fee-paying pupil has a chance of receiving a higher education either six or seven times greater than that of an equally able free pupil. We may recall that the evidence at our disposal makes it certain that this is a conservative estimate and that the extent of social inequality may well be greater than that here recorded.

Table XVI analyses inequality of the converse kind. It compares the percentages of sub-standard pupils of the two social groups who nevertheless enjoy educational privileges. Here the disparity is even more striking. A sub-standard child of the fee-paying group has an opportunity of receiving a higher education between 58 and 162 times greater than that of a similar child of the free group.

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TABLE XVI

MEASURES OF SOCIAL INEQUALITY IN EDUCATIONAL OPPORTUNITY—II

(The figures refer to pupils who will leave school as Free or Fee-paying Pupils)

	I.Q.		I.B.	
	130 and over.	140 and over.	120 and over.	130 and over.
1. <i>Percentage of Pupils with Opportunities of Higher Education, but without High Ability, to Total Number in each category:</i>				
(a) Free Pupils	0.3	0.9	0.5	1.1
(b) Fee-paying Pupils	48.5	61.5	50.5	64.0
2. <i>Inequality of Opportunity:</i> [Proportion of (a) to (b)]	1 : 161.7	1 : 68.3	1 : 101.0	1 : 58.2

IX. SUMMARY

1. Over ten thousand individuals between the ages of 9 years and 12 years 6 months, drawn from public elementary (including central), secondary, private and preparatory schools in the London area, were tested with the Otis Advanced Group Intelligence Test (Form A) and assigned Intelligence Quotients on the basis of the existing American norms.

2. Norms based on the data of the present investigation were used to derive Indices of Brightness for all subjects examined.

3. Correlation coefficients which were obtained for Age and I.Q. and Age and I.B. demonstrated the superiority of the latter in the comparison of individuals in populations selected for intelligence.

4. The reliability coefficient for I.Q. was found to be $r = 0.85 \pm 0.027$ and for I.B. $r = 0.92 \pm 0.015$.

5. A system of weighting was designed to take account of the selective factors in English education and inequalities in sampling.

6. Mean figures and percentile distributions were calculated for the I.Q. and I.B. of various categories of the school population.

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7. Estimates are given of the percentages and numbers of individuals of different social and educational status who attain various selected levels of high ability.

8. The proportion of individuals of elementary school origin who are afforded the opportunity of a secondary school education at the expense of the State was found, on the basis of official statistics for 1931-2, to be 6.6 per cent.

9. Similarly, the proportion of such individuals who normally proceed to secondary schools as fee-payers is 3.9 per cent.

10. If we take the level of ability attained by approximately 50 per cent. of children who are educated at their parents' expense (I.Q. 130 or I.B. 120), then approximately 25 per cent. of pupils educated at the expense of the State attain the same level. When account is taken of the unequal size of these two social groups, it is found that the numerical contribution at this level of ability of the last-named group amounts to 80 per cent. of the total. Of these only a little more than a quarter have the opportunity of proceeding as free pupils to secondary schools. Individuals at this level of ability, whose education is limited to the central school, alone exceed the numbers of all fee-paying pupils of similar ability. In the whole school population more than 50 per cent. of the able pupils are without the opportunity of higher education. While only three per thousand of free pupils in secondary schools fall below the selected level of ability, the corresponding figure for the entire group of fee-paying pupils (all of whom nevertheless enjoy the opportunity of a higher education) is nearly 50 per cent. In other words, taking children of equally high ability, seven fee-paying pupils will receive a higher education for every one free pupil. Conversely, if we consider children who fall below the selected level of ability, for every one free pupil who is afforded the opportunity of a higher education, there are one hundred and sixty-two fee-paying pupils who enjoy the same advantages.

11. Similar calculations have been made, using higher criteria of ability.

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12. If, instead of 50 per cent., we assume that only 10 per cent. of children educated at their parents' expense are ineligible by virtue of inferior ability for receiving a higher education, then 72 per cent. of free pupils are eligible.

13. At a very high level of ability, represented by the attainment of the uppermost one per thousand in the general school population, two-thirds of the total originate in elementary schools, of whom 70 per cent. are of wage-earning parentage. Of the entire group of such exceptional individuals, 50 per cent. are the children of wage-earners, and 33 per cent. of members of the higher social and professional classes.

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THE DEVELOPMENT OF NATIONALISM IN WALES

By R. T. JENKINS

THE term "Welsh" is frequently used in a purely regional sense, and it may be well to state at once that regional attachment or sentiment—which is found among many people in Wales whose origins and speech are English—will not occupy us in this paper. Nor, from considerations of space, shall we be able to deal in any fullness with Welsh nationality, which of course has a very long history.¹ Nationality is obviously the basis of nationalism. But nationalism is something more. It involves more even than an awareness of nationality, for it is a deliberate assertion thereof, and a conscious direction of effort towards some external manifestation which is conceived, rightly or wrongly, to be essential to the well-being of the nationality. Granted these definitions, it will be found that nationalism in Wales is a very modern thing, little older (apart from an occasional voice crying in the wilderness) than the second half of the nineteenth century.

At the beginning of that century the Welsh people differed from its neighbours in several important respects; the reader is referred to the works mentioned in the footnote for an account of the historical causes of this difference, for we can here but make a brief and of necessity a somewhat unqualified statement. In the first place—and this is the ultimate cause of all the rest—the very great majority of the people spoke a language other than English. Secondly, owing mainly to the Methodist revivals, the great majority (after 1811) were Non-conformists, and by 1843 or so they had become "Dissenting," in a more positive sense perhaps than they are to-day.

¹ For a necessarily very concise summary of Welsh history the reader is referred to Sir John Lloyd's booklet in Benn's Sixpenny Series. A fuller account of the centuries after 1485 will be found in David Williams, *History of Wales, 1485-1931* (John Murray), or Idris Jones, *Modern Welsh History* (G. Bell).

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This fact could not fail to accentuate a feeling of "otherness" between ourselves and our neighbours. For Dissent in England, however important and influential, has never been but a minority. And not only were Anglican Liberals in England unimpressed by what Welsh Nonconformist Radicals considered to be the urgency of their case; even English Nonconformity seemed often enough to take a somewhat academic view of the Welsh problem. For that matter (in parentheses), the other camp seems to have been similarly affected; one has heard that the Welsh bishops did not always feel that their English confrères were giving them the fullest possible support.

But a third difference arises from the almost complete Anglicization, in language and above all in sentiment, of the gentry in Wales, a process which was well-nigh consummated by the end of the eighteenth century; by that time very few of them could speak other than pidgin-Welsh. As a result, the gentry, hitherto very powerful in political and administrative matters, lost touch with their tenantry. Moreover, they were Anglican, their tenants largely Nonconformist. It is hardly too much to say that during the nineteenth century the two classes lived in wholly different worlds. This is not to say that the gentry were at all widely unpopular—there were no shot-guns behind hedges in Wales, though at times individual landowners were bitterly detested, notably in 1843, in 1859, in 1868, and now and then later. Nor can even its friends claim that the Welsh tenantry showed any marked independence of spirit towards its masters (at any rate until the Ballot Act came); *The Times'* special correspondent in 1843 marvelled at the docility of the tenant in Wales, and averred that an English farmer would not have stood a tithe of the "insulting, haughty, offensive demeanour" which the West Wales squire exhibited towards his tenants. None the less, the Welsh became an exceedingly democratic people. Some would say an excessively democratic people; modern Welsh critics of the younger school inveigh against the

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"bourgeois," even the "plebeian" tone of Welsh life in the second half of the nineteenth century. It has been said that Wales has lost a great deal through this "skimming-off" of its aristocracy—the graces of social intercourse, the arts which in older times could not live without patronage, standards of culture and contacts with the outside world which might otherwise have been accepted without the risk of forswearing our national identity, and against which we should not in that event have needed to put up, instinctively, a protective barrier. Much of this is very true, though we may hope that the deficiencies can be made up in the future. But if an aristocracy has abdicated the more valuable of its functions, what is one to do about it? The people had perforce to find its own leaders. It found them among the Nonconformist ministers, who were for a very long time more widely educated than the mass of their congregations, and whose oratorical gifts gave them a great hold upon their people, but who inevitably exhibited the limitations of their calling and outlook. In any case, the people, described even in 1796 as "feudal," became pronouncedly democratic, and the huge industrial development of South Wales, as the century wore on, could not fail to accentuate this feature.

All these differences are, however, merely the raw material of nationalism; it will now be our task to consider their transformation into nationalism proper. Nationalisms are prone "to begin with a little aversion," and it may be well to notice first one or two ways in which the home-keeping Welshman, hitherto for several centuries sheltered (except on rare occasions such as the rough-riding of Rupert's officers during the Civil War) from any very intimate or continuous contact with Englishmen, became unpleasantly aware of the "foreigner." The new agriculture of the later eighteenth century seemed to the landlord in Wales a good opportunity of enrichment. With this perfectly natural desire, he sought expert assistance in exploiting his lands, and the number of estate-agents or "stewards" in Wales was very considerably

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increased. Perhaps it was inevitable that these men, generally speaking, should be Englishmen (or Scotsmen); not unnaturally, too, much of their work consisted in "driving" an easy-going and rather slovenly tenantry. Such was the Welsh peasant's introduction to the Englishman at close quarters; the "stewards" as a class were universally and bitterly hated, and a widespread anti-English feeling arose. So, too, in the industrial world; the managerial element was for a long time almost wholly English, and its sins were unloaded upon the English people as a whole.

Nor can it be denied that Welsh nationalism has from time to time had leaders into whose make-up there had entered, for various reasons, a very hearty dislike of the Englishman as such—to call it "unreasoning" may be a comfort, but does not remove the fact. Two particularly interesting men of this type were Michael Daniel Jones (1822–1898) and Robert Ambrose Jones (1851–1906); to them, England and everything English were anathema; the vials of their wrath were poured forth upon this, that, or the other characteristic of Victorian England—whose self-complacency indeed somewhat invited criticism, and has received it in full measure from modern English writers. Particularly repugnant to these two Welshmen, as to some of their predecessors like Samuel Roberts of Llanbrynmair (1800–1885), were English Imperialism and its methods, its "native wars" in Africa and elsewhere.

Michael Jones, in his anxiety to preserve his compatriots from Anglicization, gave a peculiar and interesting twist to that emigration from Wales which the agrarian distress of the 'forties had so greatly augmented. The older practice had been to emigrate to the United States (where there are still Welsh-speaking communities), either individually or in colonies such as that which Samuel Roberts had in 1857 led to Tennessee. Michael Jones, in an endeavour to prevent the swamping of Welsh emigrants by English-speaking influences around them, founded in 1865 a Welsh settlement in

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a remote part of the Argentine. The ups and downs of this colony cannot be detailed here, but it is still fairly flourishing, and from time to time the University Colleges in Wales have to deal with an unusual type of undergraduate, who speaks Welsh and Spanish fluently, but knows very little English. What we have to note here is that the colony, though economic circumstances were the primary cause of its foundation, was yet a distinctly nationalistic manifestation.

Ambrose Jones was less obviously "quaint" than Michael Jones. His was no antique full-bearded figure, in homespuns of ancient cut, and buckled shoes. But he is the less easy to dismiss. He had resided on the Continent, and was widely read in several European languages. His turn of mind was French (he had in fact French blood in his veins); he had an immense admiration for the great French publicists, and his own copious journalism had all the clarity and pungency of his models. He had freed himself from the domination of the idols of the Welsh market-place, yet without any rejection of the religious and political beliefs of his countrymen, so that it was possible for him (as it had not been possible for his earlier compatriot Robert Owen) to exercise influence on the average Welshman. With the actual content of his teaching we cannot deal here, but it is right to point out in this connection that there have been few, even outside Wales, who have lashed Welsh shortcomings so sternly as he did. But his special function was to drive home into the Welsh mind the fact that England was not the only fount of ideas and culture. It would not be unfair to call him anti-English, but it is rather more important (in view of his steadily increasing vogue among young Welshmen) to note that both in political and in cultural matters his stock of ideas was wholly non-English.

We have been led rather astray from strict chronological sequence. To return to it: one important outburst of markedly anti-English feeling cannot be passed over unnoticed. This was the "Affair of the Blue-books"—the

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agitation aroused in Wales by the Report on Education in Wales, of 1847. The strictly educational findings of the three Commissioners were not, in general, very wide of the mark, nor indeed did they go much beyond what Welsh educationists even at the time would on the whole have been prepared to admit. The mischief was that the Commissioners, precluded by their own antecedents from any real understanding of Welsh problems, offended deeply in two ways in particular. They assumed quite calmly that the Welsh language was an unmitigated nuisance, and that the very aim of education in Wales was to get rid of it. And in their observations (justifiable enough in detail) on social conditions and popular morality, they forgot all sense of proportion. They forgot in particular that all these things could be amply paralleled in the English shires—for example (though no one at the time seems to have pointed this out), that there existed an almost contemporary report on certain districts in Kent, within sight of Canterbury towers, revealing conditions closely resembling those which they had stigmatized in Wales. Their remarks assumed the complexion of a national indictment. A storm of indignation followed, in which the real merits of the Report—its valuable educational data, its scathing observations on absentee landlords and their indifference to the education of the people, its warm-hearted denunciation of the cruelties of the new industrialism—were completely forgotten. Much of the attack on the Report was mere incoherent rage. But much more was not; and it was not only Nonconformist Radicals like Henry Richard and Evan Jones who took up the cudgels for the Welsh people. The Dean of Bangor (an Englishman who had taken the trouble to learn Welsh) was caustic in his comments on the Report, and that stout Conservative Sir Thomas Phillips (the defender of Newport in the Chartist outbreak of 1839) published a bulky volume in refutation of it. Perhaps, indeed, no other single event throughout the century did more to sharpen the consciousness of difference between the two nations.

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With the growth of Radicalism came another reinforcement of nationalistic feeling. It has already been pointed out that the preponderance of Dissent in Wales (even the Methodists must be reckoned among the "political Dissenters" from about 1843 onwards) produced such a difference of emphasis in the demands of Welsh Radicalism as to imperil perfect accord even with the leaders of Radicalism in England. Granted that they wished for the same things, yet they did not always want them at the same time, or in the same order of preference. Not only is this true of the Welsh agitation for Disestablishment and Disendowment; it is true also of the cry for increased educational facilities, and—though the religious issue was only very indirectly involved here—of the demand for reforms in the Land Laws. In each of these three matters (and in one or two others, such as Licensing Reform, whether or no we accept the attitude of Welsh Dissent on this point), the difference of pace was so marked that Welsh demands, when granted at all, had to be embodied in special Welsh Bills; and it proved no easy task to rally English Liberal support in the Commons behind these Bills. The effect of all this was to give Radicalism in Wales a distinct tinge of nationalism, in the political sense. In the 'seventies, 'eighties, and 'nineties, it seemed so adequate an expression of the voice of the majority of Welshmen that the Welsh Liberals in the House could, no doubt in all sincerity, and certainly without any demur on the part of their electors (though even in those days Ambrose Jones was acute enough to discern the truth that Liberalism was no more essentially nationalist than was Conservatism, Dissent no more so than Anglicanism), assume at last the name of "The Welsh National Party."

A further strengthening of political nationalism came from abroad. Dr. William Rees (1802–1883), minister of the Welsh Independents in Liverpool, and founder of what was in effect the first newspaper in Welsh—*Yr Amserau* (The Times), 1843—was strongly attracted by the various revolu-

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tionary movements in Europe. Rees had a ready pen; he was also an exceedingly popular public lecturer, and his advocacy of any cause was certain to be effective. Though such men as Lewis Edwards and Samuel Roberts were also sympathetic, it was undoubtedly William Rees who did most to introduce the Hungarian and Italian movements in particular to the notice of the Welsh-reading public. We may smile grimly at the thought that a Magyar aristocracy, notoriously intolerant of its own racial minorities, should have been presented to Welshmen in the guise of a "small nation" fighting for liberty, but so it happened—as it was to happen in Ireland through the pen of Arthur Griffith. Rees was uncritically enthusiastic. More steady-going men like Lewis Edwards could not fully accept Mazzini; pacifists like Henry Richard and Samuel Roberts shook their heads over the glorification, later on, of the warrior Garibaldi by one who had shared their comparative isolation (even in Wales) in denouncing the Crimean and other wars; Palmerston might seem a curious object of hero-worship in a puritanical and Radical community—but Rees lectured on him everywhere, and justified all his works. The cause of "small nations," thus popularized, entered deeply into the affections of the ordinary Welshman, and he could hardly fail to draw a moral nearer home.

The next impulse was to come from the Irish Home Rule movement. In spite of common cultural origins, there had been for many a century little contact or sympathy between Wales and Ireland. From Tudor days onwards, the Protestantism of Wales—sharpened in turn by Puritanism and Methodism—was in pretty complete accord with English opinion on matters Irish and Catholic. Catholic Emancipation, accepted by Welsh Dissenting leaders (but not by the Methodists) as a logical consequence of "liberationism," aroused little real enthusiasm even in their bosoms; and the increased grant to Maynooth (1845) was bitterly assailed in the Welsh press. The disestablishment of the Irish Church

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in 1869 was, of course, welcomed by Welsh Nonconformists, but rather in the spirit which impelled Macaulay's Puritan to put down bear-baiting. William Rees, eager in his support of Parthians and Medes and Elamites abroad, drew the line sharply at Irishmen.

It might indeed have been expected that Welsh Radicalism, if forced to choose between Gladstone and Chamberlain, would have been Chamberlainite. The Birmingham programme of religious "liberation," of popular education, land reform, temperance reforms, and so forth, was almost exactly what the mass of Welsh electors would have found to their liking. And in fact Chamberlain had at first the powerful support of Thomas Gee (1815-1898), publisher and editor of *Baner ac Amserau Cymru*, an ably-written newspaper incorporating (as its title shows) the old *Amserau* of William Rees. It is even now not easy to understand why the Welsh public chose rather to make a hero of Gladstone—hard to see what Gladstone ever actually did for Wales, or (to do him justice) what there was in his outlook and interests to lead anyone to expect from him any very specific agreement with the ideals of Welsh Nonconformist Radicalism. What is absolutely clear is that Gee was rushed off his legs by the force of public opinion. It is true that even in the *Baner* itself—for Gee had never closed the paper to expressions of the contrary view—Ambrose Jones from 1880 onwards wrote trenchantly in support of Ireland. But one feels that this is not in itself an adequate explanation; it would seem that the logic of William Rees's championship of oppressed peoples must have been more apparent to many of his countrymen than it was to Rees himself and his fellow-leaders. At any rate Michael Jones and others, to Gee's disgust, arranged meetings in various parts of Wales for Michael Davitt (1885); unsold copies of the *Baner* began to return to the office in disturbing quantities. Gee—no doubt also feeling that Gladstone was on the whole the better leader—gave in; Irish Home Rule became an article in the Welsh Liberal creed. Not unnatur-

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ally a cry for Welsh Home Rule began to gather force. The "Welsh National Party" duly inscribed the phrase upon its banner.

In the closing years of the Gladstonian *régime* all seemed favourable. The ranks of the Parliamentary Party had been reinforced by the election of several promising young men. Some of the older members, like Henry Richard, Sir George Osborne Morgan (an Anglican Radical), and Stuart Rendel (later Lord Rendel, an Englishman who had served Wales honourably), had rendered devoted service, but the new men seemed to be in somewhat closer contact with their people. In spite of all that has since happened in Wales, popular sentiment still prefers to regard Thomas Ellis (1859-1899), who became M.P. for Merioneth in 1886, as the symbol of this "Young Wales" movement. Ellis, who died too early to allow of any really adequate judgment of his capacity as a statesman, had been nurtured on the teachings of Mazzini and of the Irishman Thomas Davis; he was a convinced advocate of Home Rule for Wales. The content of his nationalism was cultural as well as political; he was keenly interested in the language and its literature, and stood almost alone in the Wales of those days in his insistence upon the importance of the fine arts. Himself the son of a tenant-farmer, and related to men who had suffered eviction for political reasons, he was especially vigorous in his advocacy of sweeping changes in the law of land tenure; here, too, Irish precedents suggested remedies. He was a zealous worker in the cause of education; he worked hard in support of the measure for creating a system of Intermediate Schools for Wales (passed, be it noted, by a Conservative Government in 1889), and of the agitation for a national university for Wales, whose first Chancellor, very deservedly, was the Conservative Lord Aberdare. It need hardly be added that in matters of Church and State he was a Radical. Altogether, all the omens were favourable for "Young Wales." The new County and District Councils (another Conservative

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benefaction) were in existence; a popularly (though indirectly) elected body was to control Welsh intermediate education; a popularly controlled University was in sight. A Disestablishment Bill was before the House; a Royal Commission was inquiring into the agrarian problem. Home Rule itself seemed not far off.

But the fair prospect quickly vanished. The collapse of the Liberal Government and of the Liberal party in England ruined all hopes not only of Welsh Home Rule but also of Disestablishment—which indeed the Government had taken up in an obviously perfunctory way. The Land Commission published a voluminous (and for the historical student a most valuable) Report, which the new Conservative Government promptly shelved. Ellis himself died in 1899. The story of his career, and of the careers of other Welshmen who subsequently attained much higher office (for he held only a minor post), has caused many Welshmen to wonder whether it would not have been better if Welsh members had imposed upon themselves the self-denying ordinance which the Irish Nationalists adopted. But (waiving the question whether the Irish practice was conspicuously successful) it is fair to say that in 1892 this seemed hardly necessary. After all, English governments *had* been induced to legislate for Wales, and it was not an unnatural assumption that to be “inside” would help rather than hinder the demand for Welsh autonomy.

Few indeed could have foreseen the setback which ensued. Disestablishment was postponed to so distant a date that when it came it had lost nearly all the value it may ever have seemed to possess, whether in the eyes of political Dissenters or in those of cultural nationalists. The situation in agrarian matters was to become so altered in later years that the Ellis policy, at any rate until the present day, ceased to have any meaning. The case for self-government—central self-government—was unexpectedly weakened by the concession of County Councils; it might thenceforth be argued more or less

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plausibly that all the practical benefits of autonomy were already in the hands of the people, and that anything more was a merely sentimental and negligible affair. Even more ominous was the advent of political Labour, which was not at all enamoured of nationalisms, and whose English leaders had less understanding of historical conditions in Wales than had either of the older parties at their worst. Here, indeed, Nemesis had come upon Welsh Radicalism; for preoccupied with ecclesiastical and agrarian problems, and by now including in its ranks a considerable prosperous middle-class *clientèle*, it had paid little attention to the specific problems of the industrial world. The Home Rule movement was driven underground; many imagined that the last had been heard of it.

But as in 1848 and 1859, so after the late War. Events on the Continent have revived the cry for Welsh autonomy. The example of the Irish Free State has been even more potent. The cultural revival, not in itself political, has yet furnished the autonomist with a powerful lever. And to-day one has to reckon with a fresh set of conditions which were not there in 1886 or 1892; not only is the positive case for Home Rule as valid as ever it can be said to have been, but facts have wrought a considerable weakening of the arguments against it. It was then common to argue that it would be unwise to entrust the destinies of Wales to new and untried men; to-day it is not so easy to counter the retort that no set of men could well be more empirical than the Governments, of all parties, which we have seen during the last fifteen years. The steady-going middle class of 1900 could be influenced by pointing out that the connection with England was of great economic benefit to Wales; nowadays, what with vanished capital, derelict industries, unemployment figures that are disproportionate even to the dismal figures of the kingdom as a whole, that argument is at any rate less obvious. The very achievement (however illusory) of Disestablishment might conceivably liberate the large Anglican vote, hitherto

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of necessity anti-Home Rule. Such (we cannot here debate them) are the considerations that are weighing with young people in Wales to-day. The new Nationalist party is absolutely detached from any of the older parties; it is small as yet in point of official membership, but it has youth and enthusiasm on its side. Right or wrong, it has the very great advantage, at the moment, of preaching the only positive policy which is before the Welsh people, and every failure of tact on the part of the central administration (or of such an analogous body as the B.B.C.) swells the ranks of the party. The public outside Wales will do well to realize that the Nationalist party will have to be reckoned with.

We now turn to the other form of Welsh Nationalism—the cultural. This is obviously, in historical order, the basis of the other. But the connection between the two has not always been obvious; it is indeed quite possible to conceive of a clash between them—a Home Rule parliament, let us say, which had in it a non-Welsh-speaking majority (as might well happen), might decline to execute some item of policy dear to the Welsh-speaking element. However that may be, it is certain that at the moment the supporters of cultural nationalism greatly outnumber the advocates of “dominion status.” Yet, conscious nationalism of this kind is hardly, if at all, older than the other. It is one thing to be Welsh-speaking, another to have a conscious desire to perpetuate the language. Religious and other benefactors of their people who in past centuries printed Welsh books, founded schools to teach reading, preached to the masses in Welsh, were one and all actuated not by any love of Welsh for its own sake but by the strictly practical and philanthropic consideration that only through Welsh could the Welshman’s soul be saved. Still less, then, are we to look in them for any love for the older literature, or any interest in the older history of their country—except, indeed, in so far as that history might be skilfully handled to show the awful consequences of Popery.

The Welsh cultural tradition had been seriously impaired

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by two circumstances. The one has already been mentioned—the decreasing interest of the gentry, formerly the custodians of linguistic and literary standards. The second was the meagre output (except for religious works) of the printing-press in Welsh; to explain the reasons for this fact would lead us rather far, but a simple illustration of it may be useful—Chaucer's *Canterbury Tales* were printed as early as 1475, whereas his Welsh contemporary and analogue Dafydd ap Gwilym was not printed until almost exactly three hundred years later. In the meantime, it is true, the Welsh people were not without a literary culture. A fairly copious production of ballads, of "carols," of "interludes," and the like, afforded evidence of a delight in literature which must be reckoned to the credit of the countryside. But its standards were not high, and it had but little continuity with the elaborate courtly poetry and prose which make the two centuries following 1282 a golden age in Welsh literature.

In the eighteenth century, a comparatively small group of men of letters began to revive interest in the pre-Tudor literature and tradition. Round about the end of that century, a coterie of London Welshmen gave this revival the dimensions of a propaganda. Unscientific but useful texts of the earlier literature were printed; grammars and dictionaries published; the story (and the legend) of the Age of Independence expounded; the Eisteddfod rehabilitated. What may seem even stranger is that in Wales itself (perhaps more especially in North Wales) poets, sprung not infrequently from those classes of society which in mediæval times would have been refused admission to bardic orders, began to write in the older, severely technical style—and that the product was no *pastiche*, but a living literature (not without its serious defects from the point of view of modern Welsh critics), which set up a still living and powerful tradition. "Resurrections" have rarely been so successful.

The revival just described corresponded in period, as the reader will doubtless have reflected, with the Romantic Re-

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vival in England, and some of the leading men of the two movements were in personal contact with each other. Yet the Welsh movement was quite as much "classical" as "romantic," and, indeed, its associations with Romanticism were rather unfortunate. The adjective "Celtic," indiscriminately applied to everything Welsh in the heyday of the Romantic Revival, has led to much confusion. To the philologist, or to the inquirer into literary origins, it is very rightly important that Irish and Welsh are cognate languages. But in trying to understand the history and culture of Wales during the last five hundred years (at least), it is even more important to forget this. It has been noted above that the political fortunes of Ireland in the latest age have not been without considerable influence upon Wales. But in the realm of culture there has been but the most trifling commerce. Attempts to "explain" this, that, or the other thing in the recent history of Wales—political, social, even religious—by a wholly fictitious "Celticity," are mere waste of time. There are but two main ingredients in modern Welsh mental life—what is native, and what is English or has been mediated through England; and the proportion between them would in fact be difficult to assess. If one had to specify any non-English influence which really did affect Wales in the eighteenth and nineteenth centuries, it would be the influence of Scotland; of Irish influence there are hardly even what a chemist would call "traces."

The Eisteddfod, already mentioned, is not without its critics. No doubt its standards tend to be low, considered from a strictly academic standpoint. And it may be held that the results are disproportionate to the cumbrous mechanism which is invoked to produce them. Yet the Chair and Crown competitions have on several occasions produced poetry which is among the greatest in the language. Again, the essay competitions have in some cases produced (and in other cases have been the means of publishing) first-class research. But over and above this we must remember the

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mass of unsuccessful competitors who have thus been stimulated to engage in literary composition or in the collection of historical material. If the diffusion of literary activity be a virtue, then clearly there is much to be said for the Eisteddfod; and if interest in things of the mind is a *differentia* of Welsh national character, the Eisteddfod (despite the prodigious amount of humbug which clings to its skirts) is entitled to its share of the praise.

It may seem odd at first sight that this zeal for the language, the literature, and the historical tradition of Wales should have been so late before finding its way into the public educational system. But we must remember that it is a common assumption in all lands that the mother-tongue and its literature need not be "taught"—the teaching of English language and literature in English schools and universities hardly goes back beyond living memory. It seemed to our forefathers in modern times that the more immediate need was adequate instruction in English, so that the young Welshman could find a career, if need were, outside Wales. It is fair to add that the Welsh language seemed in those days sufficiently "protected" by the sheer number of those who spoke it, and that the activities of the religious organizations (especially the Sunday Schools) provided in effect a tolerably efficient provision for the teaching of Welsh.

Welsh was indeed introduced into the schools only by a side-wind. Educationists of the 'seventies and 'eighties perceived that the rigid exclusion of the language from the schools was defeating its ostensible purpose—the acquisition of English. An influential society was formed (1885) to promote the use of Welsh in the schools in teaching English. Its title—"The Society for the Utilization of the Welsh Language"—with its rather grotesque suggestion that Welsh was a sort of industrial by-product, is significant; significant, too, is the fact that the title has long been dropped, and that the still flourishing society is now known simply as *Cymdeithas yr Iaith Gymraeg*—"The Welsh Language Society." For

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Welsh, once introduced, made headway. A little later it was recognized by Whitehall as a grant-earning subject, and unhappy schoolmasters whose salaries depended on the amount of School Grant were relieved of the fear (or deprived of the excuse, as the case might be) that time given to Welsh might entail pecuniary loss. With the increasing pressure on the schools of the general revival of interest in Welsh, and with the cordial co-operation of the Welsh Department of the Board of Education (founded in 1907), more and more prominence has been given to Welsh in the schools. In the earliest years of primary education, Welsh is in many schools the sole language of general instruction. Indeed, though of course actual practice is in many districts lagging behind what is permissible by regulation, the only theoretical question of importance which has still to be decided is whether Welsh shall be made obligatory on all pupils in all schools; there is naturally much difference of opinion on this point.

Analogous developments, though not to anything like the same extent, have taken place in the secondary schools; here, however, the very conception of secondary education hitherto prevalent, in Wales as elsewhere, has tended to reduce Welsh to the position of a "subject" among other subjects. In the University Colleges, particularly since the foundation of the autonomous University of Wales with its degree courses in Welsh subjects, the progress of Welsh studies has been very considerable, and this has reacted upon the schools.

This vigorous revival of interest in the language and literature and history of Wales has owed very much to eminent Welshmen like Sir John Rhys (1840-1915), a "Celtic" scholar in the strict sense, and also a prominent figure in the public life of Wales. His pupil, Sir John Morris-Jones (1864-1929), grammarian and poet, fought with might and main for the purification of the language and the maintenance of strict canons of prosody and diction in its poetry. Other distinguished academicians of that generation are happily still with us and must not, therefore, be named. To the mass of

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the Welsh people, Sir Owen Morgan Edwards (1858-1920) is an even more significant figure than those already mentioned. Careless of the rigid academic standards which his friend Morris-Jones championed, Edwards sought rather to popularize. The magazine *Cymru*, which he edited for thirty years, diffused attractively-presented information on Welsh history and tradition; side by side with it there appeared a long series of cheap reprints of Welsh classics, chosen from every period of the literature. Thus, quite apart from Owen Edwards's services in later life as Chief Inspector of Schools in Wales, his place in the renaissance of Welsh is very considerable. *Urdd Gobaith Cymru* ("The League of Welsh Youth"), founded by his son, and now including many thousands of members, is an appropriate memorial to him.

A few remarks on the present position of the language may be useful. According to *Whitaker's Almanack*, there were in Wales and Monmouthshire in 1931, out of a population of 2,593,014, as many as 197,932 monoglot Welsh speakers over three years of age, and 811,329 who were returned as speaking Welsh and English. The figures may not be strictly accurate, but any suspicion that the number of those who can really speak Welsh is less than this may be discounted when we remember that large Welsh-speaking communities in the English towns are not counted at all in the census figures—the only possibility of even approximately reckoning their number is by adding up the numbers of communicant members of Welsh churches of all denominations in England, and even so there will obviously be very many unaccounted for.

Interpretations of these figures will naturally differ. To the ardent Welsh patriot they may seem discouraging. It is clear that less than half the population of Wales can speak Welsh at all, in spite of the vigorous campaign of the last few decades; clear also from an examination of previous returns that the percentage shows a decline. There are those among us who regret in particular the rapid shrinkage in the number

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of Welsh monoglots, whom they regard as essential to the preservation of the language—a view which, whether tenable or not in theory, is in practice rapidly becoming irrelevant. Isolation has undoubtedly preserved Welsh in the past. But nowadays, universal teaching of English in the schools, English daily papers on every breakfast-table, a steady bombardment of Welsh ears, in the remotest recesses of the country, by English broadcast transmissions, have radically altered the conditions. Most Welshmen would agree that if Wales cannot be bilingual, it cannot be Welsh-speaking at all.

Yet, the figures may well arouse more cheerful thoughts. Even in 1931 there were a million people in Wales who could speak Welsh. Surely (even after discounting errors) that is a rather solid fact. It has not yet come to this, that a foreigner wishing to learn Welsh should have to resort to inaccessible islands off our coast to pick up the living language painfully from the lips of fisherfolk. We can still provide an ample supply of teachers for our schools. More : beyond any doubt there are, in absolute numbers, far more people speaking Welsh to-day than at any previous stage in our long history—the entire population of Wales two hundred years ago was not half as numerous as is the Welsh-speaking fraction of it to-day. More people than ever are reading Welsh; more than ever are writing it.

Besides all this, it must not be forgotten that a language which is, so to speak, in full working order is very difficult to kill. You cannot (even if you think it desirable) persuade people not to learn English; you cannot (and here is the nationalist's difficulty) persuade them by argument that they *ought* to learn Welsh. But neither can you by argument persuade people that they "ought not" to keep their Welsh and teach their children Welsh. Much time and energy have been wasted in "proving" things that are incapable of proof—or do not matter even if they are true. It is no doubt a difficulty for Welshmen that they have to live next door to one of the world's major languages and literatures;

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it provokes a comparison, and suggests an inferiority, which would not have been at any rate so obviously arguable had the neighbour-culture been among the "minor" European cultures. But the comparison is in fact irrelevant. There is not the slightest reason why a literature, as a condition of its existence, should be one of the world's great literatures; it suffices that it should be the literature of its own people, the expression of a living culture; and its chances (if that mattered) of attracting attention from outside will only be diminished by a self-conscious striving for universality. Here is a field in which being is its own justification.

THE DISTRIBUTION OF THE BLOOD-GROUPS AND ITS BEARING UPON THE CONCEPT OF RACE

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PART II¹

THE practical utility of any classificatory system resides in its value as a means of identifying the objects of scientific study. While this defines in a general way what all naturalists are agreed upon, when they undertake the construction of a classificatory system, a precise interpretation of what is involved in the concept of identification is a matter of some difficulty. Two organisms are rarely, if ever, identical in the genetic sense, except where polyembryony, or spore formation without nuclear segregation, occurs. Even with this minor qualification, absolute identity is never realized by a perfectly symmetrical distribution of environmental variables. Consequently, a unit of classification, be it variety, species, genus, or phylum, is an attempt to state, in as economical a way as possible, certain limits of variation which circumscribe the attributes of the individuals which are labelled as members of a group. The basic difficulty of classification, so conceived, arises from the immense variety of characteristics which may distinguish one organism from another. Classification is, in part, a statement of the limits of individual variability of single attributes, as when we distinguish Manx cats from all other cats by the absence of tails, or cordates from other phyla by the presence of pharyngeal clefts. At the same time it is an attempt to indicate, with or without any explicit metric, the concurrent variability of a large group of attributes.

The criteria used in the definition of the attributes of

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organisms may depend either upon discontinuous variation, when the criterion for any given distinction is all or none, or continuous variation, in which case all the earlier classificatory work on organisms was quite content to use words like "large" and "small" as orders of magnitude to be interpreted as best they could by the context in which they occurred. All scientific enquiry starts from the common experience of mankind. It is an indisputable fruit of our common experience of plants and animals that there are concomitant limits of variability for large groups of attributes. For instance, few people with ordinary powers of observation would disagree in describing a particular bird as a "sparrow." In so far as this is so, the word "sparrow," or its Latin equivalent, is an instrument for the description of a well-defined group of animals. The practical task of classification begins when we attempt to explain what we mean by a "sparrow" to someone who has never seen one.

Taxonomy has its historical roots closely intertwined with the practical task of providing guidance in distinguishing herbs with supposedly medicinal properties. The simplest conceivable unit of classification is the genetically pure line distinguished from parental or collateral stocks in virtue of some discrete all-or-none characteristics, or some single average measurement with its appropriate dispersion. Such a group rests upon a purely experimental basis. There is no obvious connexion between the way in which it is defined and the definition of those larger units of classification employed in describing the diversity of organisms as they occur in nature. Here the first task of the scientific investigator is to find a precise and economical way of expressing the association of a vast assemblage of characteristics which may be easily recognized as such by common observation or sustained experience in the field or museum, but are not easily communicated to the world of scientific discourse.

The issues raised by a radical examination of the scope and nature of classification are among the most recondite and

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fundamental, and at the same time, in the present context, among the most neglected in the field of scientific methodology. Historically, they take us back to the mediæval controversies of the realists and nominalists, if we are to see all that is involved. The problem of defining the concept of race, species, or phylum cannot be rightly undertaken apart from a consideration of the function of language in the communication of scientific truths.

Two of the words which are used as labels for classificatory units fell into the hands of biologists after they had served a long apprenticeship in philosophical controversies with a predominantly theological rather than scientific orientation. "Genus" and "species" seem to have passed from the Peripatetics and the Schoolmen, through the hands of the mediæval herbalists, before they were brought into systematic use by Linnaeus. Around their meaning, and no less that of the race concept, still clings the aroma of the Aristotelian metaphysic. For the modern scientist, a "class" implies nothing more than a label for the common properties of a group of objects. In the disputations of the realists concerning *differentiæ* and *accidens*, the species was endowed with an existence independent of the objects classified as of the same species, or what is equivalent, there remained in the object its specific substance, when all its attributes had been stripped away. Something of this naïve realism persists in the peculiar indifference which taxonomists in general have shown to a critical analysis of the meaning of the terms they use. At the opposite extreme, a clear statement of the scope and nature of classification in biology is not promoted by the naïve nominalism which is inclined to dismiss the existence of a phenomenon because the language in which it is described is not sufficiently definite. The fact that we find it difficult to define a satisfactory criterion for a classificatory group does not dismiss the fact that we do encounter associated limits of variability for large assemblages of characters, and that we recognize with little difficulty hierarchies of such

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associations. Thus, although the distinction between an artificial and natural system of classification appears, at first sight, to savour of the old realist doctrine, it may embody a genuine recognition of the way in which the manifoldness of nature presents itself to human observation. The historical roots of the issue are clearly stated by John Stuart Mill [6] in the following passage:

"The Aristotelian logicians . . . did not admit every class which could be divided into other classes to be a genus, or every class which could be included in a larger class to be a species. . . . It was requisite, according to their theory, that genus and species should be of the *essence* of the subject . . . and in every classification they considered some one class as the lowest or *infima species*. . . . As applied to individuals, the word essence has no meaning except in connexion with the exploded tenets of the realists. . . . Is there no difference, then, save this merely verbal one, between the classes which the Schoolmen admitted to be genera or species, and those to which they refused the title? Is it an error to regard some of the differences which exist among objects as differences in *kind* (*genere* or *specie*), and others only as differences in the *accidents*? Were the Schoolmen right or wrong in giving to some of the classes into which things may be divided the name of kinds, and considering others as secondary divisions grounded on differences of a comparatively superficial nature? Examination will shew that the Aristotelians did mean something by this distinction, and something important; but which, being but indistinctly conceived, was inadequately expressed by the phraseology of essences and the various other modes of speech to which they had recourse. . . . There are as many actual classes as there are general names positive and negative together. But if we contemplate any one of the classes so formed, such as the class animal or plant, or the class sulphur or phosphorus, or the class white or red, and consider in what particulars individuals included in the class differ from those which do not come within it, we find a very remarkable diversity in this respect between some classes and others. There are some classes the things contained in

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which differ from other things only in certain particulars which may be numbered, while others differ in more than can be numbered, more even than we need ever expect to know. . . ."

What we have to ask is why naturalists have found it difficult to give a precise formal definition of the groupings they recognize. Before attempting to answer this question, it will clarify further discussion if we examine the impact of the evolutionary doctrine on the growth of taxonomy.

Linnaeus may be described as the last of the herbalists with whom convenient identification with no ulterior pretensions was the main objective. The only respect in which the work of Linnaeus marks a philosophical advance upon that of his predecessors is that it created the problem of the origin of species by accepting the principle of biogenesis as a universal or well-nigh universal principle of nature. At the base of his classificatory system, Linnaeus defined a species as a breeding unit, a definition which, if rigorously adopted, would relegate the finer ramifications of classification to experimental analysis. In fact, this practice has never been followed. Botanical taxonomists have endeavoured to extricate themselves from the dilemma by distinguishing between "Linnaeons" and "Jordanons," using these terms in a manner which corresponds, in a rough and ready way, with what zoologists respectively refer to as "species" and "local races." Zoologists in the broadest sense of the term, including anthropologists, have never reached any general agreement concerning the distinction so drawn. For instance, it is obviously unworkable as applied to fossil forms in general, and to man in particular. In practice, there is no universal consent concerning a criterion for different hierarchies of resemblance. If for practical reasons or from anthropomorphic bias a species happens to be the subject of very close study, gaps which would not be sufficient to separate species in a nearly related form are recognized as the basis for erecting new genera.

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The Linnaean species was an experimentally valid concept, though the criterion it embodied could not commend itself to taxonomical routine. In his larger units of classification, Linnaeus, like the herbalists, was probably concerned, in the main, with constructing a convenient key for the identification of species. For this purpose, a comparatively few clear-cut differentiae were the prime consideration. Cuvier's doctrine of the unity of type as a basis for natural classification drew attention to the facts that organisms fall into relatively discontinuous groups on the basis of complex assemblages of attributes, and that classificatory groups based upon such assemblages may be very difficult to differentiate in terms of a single or a small number of diagnostic peculiarities. In this way the distinction between a natural and an artificial system took shape. The evolutionary doctrine developed the distinction in a form which contained no explicit metaphysical implications such as those of Cuvier himself, who seems to have regarded the various manifestations of unity of type as different moods of a cosmic artificer. The destruction of types unable to compete with their contemporaries, extending over a long historic process, became at the same time an explanation of those discontinuities which make it possible to recognize organisms as members of discrete groups, and also of those inconsistencies which make a system of classification too severely dominated by economy of description an unsatisfactory way of representing different levels of resemblance for a wide range of attributes.

A natural classification thus acquired a new philosophic significance. Different levels in the hierarchy of classificatory units represent different levels in a genealogical tree. This is at least an intelligible objective for classification. Up to a point, it is accepted as a practicable one by all biologists. No one doubts, for example, that it can be successfully applied at the grosser levels of classification. All biologists will admit that reptiles, birds, and mammals constitute a natural triad in the sense that if we follow back the pedigrees

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of birds and mammals, respectively, to their common ancestry, the ancestral group would have characteristics which would lead us to describe it as a reptile if it were living to-day. In contradistinction to this broad basis of agreement, two noteworthy features of the influence of the evolutionary doctrine leave room for considerable controversy. (1) One is how far it is possible to carry the process of classification as an adequate representation of phyletic relationships. (2) The other is that by emphasizing the historical instability of any unit of classification, the evolutionary taxonomists shirked the responsibility of clarifying the meaning which they attached to the various units of classification which they adopted.

The first issue is of fundamental importance to anthropology in two ways. The confidence with which the early evolutionists undertook to express the phylogenetic relations of organisms knew no bounds except those prescribed by human fatigue. In pushing phyletic speculation into the finest ramifications of an ethnic system, it endowed a study of the geographical distribution of physical idiosyncrasies among mankind with the theoretical objective of arranging the peoples of the world in groups distinguished by a greater or less predominance of primitive, i.e. simian, characteristics. Behind this there was undoubtedly the disposition to hope that such a task, once accomplished, would throw light upon the cultural history of mankind.

This confidence has been shaken by the further progress of research along two divergent lines. Palæontology has emphasized the existence of convergent and parallel evolution on a much larger scale than the early evolutionists would have been disposed to admit. For the assurance with which Darwinian naturalists were prepared to reconstruct pedigrees from the morphology of contemporary forms has given place to the belief that phylogenetic speculation is barren unless it is fortified by abundant fossil remains, a thesis amply sustained in the writings of Wood Jones. In another

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quarter, criticism of the optimism of an earlier generation has emerged from the studies which geneticists have lately undertaken in the fields of *interspecific evolution*. Such studies have now been carried out on animals and plants of widely separated groups. Hence the conclusions drawn from them have the most general validity.

The issue as it affects the practice of taxonomy has been recently stated by Hogben [2] in the following passage:

"The ubiquitous occurrence of parallel evolution in the record of the rocks is fully consonant with the findings of experimental genetics, though systematic biology in general and physical anthropology in particular have pursued their course with a serenity unimpaired by the results of experimental investigation. This is perhaps because geneticists have refrained from commenting on the devastating consequences of their discoveries. It has long been known that similar varieties have emerged in closely allied species, but bodily similarities may result from entirely different changes in hereditary materials. Recent work on the fruit-fly *Drosophila* has shown that the germinal material of allied species is constantly changing in precisely the same way. In several species of the fruit-fly similar varieties have arisen as sports under experimental conditions. Modern genetical analysis makes it possible to allocate the genes responsible for the production of new varieties or mutants to the chromosomes on which they reside, and to indicate the actual position which they occupy along the length of the chromosomes. Metz and Sturtevant, who have constructed chromosome maps of several different species of the fruit-fly *Drosophila*, find that a large number of similar varieties have arisen through changes which have occurred at corresponding situations on corresponding chromosomes. They are therefore equivalent in a genetical as well as an anatomical sense. The consequences of this new body of information are immense, and few biologists have as yet realized how far-reaching is its significance. In *Drosophila simulans* Sturtevant has identified some twenty-five mutants bodily, similar to a series of mutants in *D. melanogaster*, with similar serial order on corresponding chromosomes. Thus yellow

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body, white eye, and rudimentary wing genes occur in the same order in both species on the X chromosome. A black-bodied, vestigial-winged, and a truncated-winged mutant have been found in *Drosophila simulans*. Their genes occur as in *D. melanogaster* on the second chromosome in the same serial relation. There is a sepia-eyed mutant whose gene resides on the third chromosome as in *D. melanogaster*. There is a mutant 'minute' with small fine bristles in both species, with its gene located on the fourth chromosome.

"To appreciate the importance of Sturtevant's work it will suffice to consider two species, *A* and *B*, in each of which has appeared a series of recessive sports, *a*, *b*, *c*, *d*, *e*, *f*, and *g*. Their occurrence in nature will be occasional, and may well escape the observation of the field naturalist. The geneticist, who is on the look-out for them, at once isolates each. By simple and direct means he can then build up a stock of *A* and another stock of *B*, each characterized by the mutant characters *a*, *b*, *c*, *d*, *e*, *f*, and *g*. Unless previously initiated into the extent of variation exemplified by the parent stock under laboratory conditions, a taxonomist who visited his laboratory and examined these cultures would find himself confronted by two species resembling one another in a series of characteristics and differing from all other species of *Drosophila* with respect to the same characteristics. . . . Reassured by the convention that these characteristics are not 'adaptive,' he would infer a common ancestor characterized by the possession of a new constellation of mutant characters. On current assumption he would be justified in erecting a new sub-genus to represent the separation of this common ancestor from the ancestral stock of other species of *Drosophila*. Metaphorically speaking, it is possible that Nature is continually playing practical jokes of this sort.

"It may be confidently predicted that experimental investigations upon interspecific evolution such as the researches of Metz and Sturtevant upon the fruit-fly will continue to progress and provide a basis for a less ambitious attitude to zoological classification. Eventually the principles of genetics will diffuse from the laboratories to the museums, and taxonomists will ask whether it is possible to draw legitimate inferences concerning family relationships without recourse to

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abundant fossil remains. We shall be compelled to abandon the hope of embodying the pedigrees of species in the terminal twigs of a classificatory system. *A fortiori* we can entertain no hope of reconstructing racial pedigrees within the limits of a single Linnaean species."

Without committing ourselves to so radical a standpoint as that which is expressed in the concluding sentence of this passage, it must be admitted that evolutionary speculation provides a very slender basis for clarifying the *infima species* which it is the aim of anthropologists to recognize. Consequently, we are thrown back upon direct observation in re-defining our concepts. This task would not be as difficult as it is, if the issue were as simple as implied in the passage quoted earlier from Mill's *Logic*. The concepts of taxonomy originated in a period when biological science was content with purely qualitative categories. Clark Maxwell's well-known aphorism that the calculus of probabilities is the only logic for the practical man had not occupied the attention of formal logicians when Mill wrote. If unity of type depended upon the existence of "multitudes of properties" all of which can be recognized in all members of a class, and none of which is encountered in members of other units, it would be easy to select a suitable number of readily detectable differentiae on the basis of mere convenience. Sometimes this method of specification is possible, as when we define a group like the *Nematoda*. Sometimes it is easy to give an approximate statement of the differentiae of a group. Thus no animals except arthropods have an ostiate heart, and all arthropods, except the few which have lost the heart altogether, possess an ostiate heart. In these few instances, the unity of type of the group is recognized by many other peculiarities none of which is absolutely universal for the group as a whole, though absent in all other groups. Even for the larger units of classification, the difficulties of a purely qualitative conception of the task of classification are great. Thus, there is little that can be said concerning the existence

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of features common to all molluscs, and absent in all other phyla. The whole assemblage owes its unity to the interlocking of the several groups in the extent to which they share different properties.

From the evolutionary standpoint we should expect that the difficulties of defining the differentiae of a unit in purely qualitative terms, i.e. all-or-none criteria, becomes greater as the size of the unit is reduced. Hence, it is not surprising that anthropologists, alone among taxonomists, have applied statistical methods to the recognition of classificatory units. The value of this procedure lies in the fact that it directs attention to a conclusion which has emerged from the foregoing discussion. Although the earlier taxonomists were content with purely qualitative categories, unity of type is implicitly a statistical concept, and the meaning of a taxonomical unit can be clarified only when the statistical character of the concept is explicitly recognized. That the full implication of such a re-definition has not been recognized hitherto results from the fact that statistical methods were first introduced to deal with attributes which vary continuously within a group, and have been subsequently employed in the search for statistical averages, characteristic of the group. Exclusive preoccupation with statistical methods, having this end in view, deflects attention from the real business of the taxonomist. This is to recognize the characteristics which *individuals* have in common.

This task can be illustrated by the controversy concerning the existence of the "mongolian" idiot as a clinical category. Few students of mental defects fail to agree in classifying an institutional case as a "mongol." At the same time it may safely be said that while most writers agree about the characteristics commonly encountered among "mongols," no two authorities make the same statements concerning which, if any, of these characteristics are common to all "mongols." In a recent study, Penrose [8] compared a group of institutional cases, designated "mongols" on grounds of super-

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ficial resemblance, with a group of unselected cases, for seven characters (I.Q. of 15 to 30, cephalic index < 82 , epicanthic fold, fissured tongue, conjunctivitis, simian line, and presence of only one crease on the minimal digit of either hand). To the nearest integer, the percentage incidence of these seven characters in the two groups of defectives was as follows:

	A	B	C	D	E	F	G
Mongols (50)	70	44	52	74	30	44	18
Unselected (350)	26	17	3	7	1	4	0

It is clear that each of these characters, present in a large percentage of individuals who would be classified as "mongols" by superficial examination, is very much more common among "mongols" as a whole than in the general population, or even among a population of defectives. It is also seen that none of them is universal. "If," says Penrose, "we now note the number of these features present in any given patient, we find that two quite distinct frequency distributions are attained for the two groups of cases, thus:

Number of characters present	0	1	2	3	4	5	6	7
Number of "mongols" with a given number of characters	1	2	10	15	14	4	4	0
Number of unselected patients with a given number of characters	188	124	32	5	1	0	0	0

"Almost three-quarters of the 'mongols' have three or more of these characters, but only six of 350 unselected patients have three or more."

These figures leave little doubt that if we had a census of the entire population, we should find that the number of associations of these relatively rare characters in groups of two or more is greatly in excess of the concurrent probability of two or more independent events. Their presence together in one and the same individual is more than a random circumstance. It betokens the existence of a diathesis of which, in response to different conditions of development, the

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various features, each characteristic of, but none common to, all "mongols" are the appropriate manifestation. This diathesis is the only thing common to all "mongols." If we like to give a modern scientific connotation to the terminology of the Schoolmen, it is the *essence* of "mongolism."

All practical taxonomists are agreed that the attempt to classify organisms in groups defined by characteristics which are common to all members of a group, and exhibited by no individuals belonging to other groups, only leads, when adopted as a general practice, to systems which are artificial; both in the theoretical sense that they fail to direct attention to evolutionary relationships, and in the practical sense that they fail to direct attention to large assemblages of attributes which are, metaphorically speaking, held together loosely. *A statistical concept of classification has its objective basis in the fact that certain associations of attributes occur much more often than their random combination inferred from their separate frequencies would lead us to predict, and the practical significance of an ascending hierarchy of classificatory units resides in the fact that what is true of a comparatively small number of individual attributes is also true of larger groups of attributes.*

Such associations as form the basis of biological classification may have their basis in: (1) a common diathesis or genetic constitution, of which the several manifestations are reactions to different conditions of development, as with clinical classifications; (2) geographical isolation, which may result in differential selection of genes; (3) the different conditions of environment which exist in different habitats, and which may possibly favour certain types; (4) different systems of mating adopted in different communities, affecting the frequency with which different gene combinations will occur; (5) differential exposure to pathogenic conditions, differences of fauna and mineral resources, different social tradition, or differential access to social intercourse with neighbours, all of which will affect the manifestations of such gene differences as may influence the social behaviour of

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individuals living in different localities. Of these, the second, third, and fourth provide the basis for any natural grouping which physical anthropology might be concerned to recognize. The last properly belongs to the domain of social anthropology. To what extent there exist groupings of the former kind is an empirical question.

That mankind can be classified with respect to a few single attributes, each of which shows a very striking concentration in different geographical areas, is beyond dispute. For instance, woolly or frizzly hair is almost universal among the indigenous populations domiciled in the part of Africa south of the Sahara, and practically unknown among the populations domiciled in Eurasia, north of the Mediterranean. It is this circumstance which first prompted the construction of classificatory schemes, and gave rise to the concept of race. Again, no one doubts the fact that there is a rough association between locality and certain simple groups of characters. For instance, it is possible to circumscribe localities where a particular type of pigmentation, hair-form, and nasal dimensions is practically universal, and other localities in which the same type of pigmentation, hair-form, and nasal dimensions is not found at all.

While these facts are universally admitted, they do not constitute in themselves any justification for the hope of dividing mankind as a whole into natural races. Among mankind we find a few communities living in restricted areas and displaying considerable homogeneity with respect to groups of characters, which are absent, or do not show the same amount of association, in other regions. To that extent such communities can be distinguished as natural races. *It will be noted that such a conception of race is consistent with the view that the vast majority of mankind is not divisible into races at all.* The only justification for using the term "race" for types based upon aggregates of physical characteristics, when such types inhabit the same locality and interbreed, lies in one of four assumptions, of which the first is difficult

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if not impossible to prove, the second is incapable of proof, the third has no foundation in genetical theory, and the fourth is not yet established. This may be illustrated by distinguishing between two types in the Scandinavian population, e.g. the Nordic and the Alpine. The substratum of fact for such racial categories is that people with blue eyes and fair hair are relatively more common in the north of Europe, and that if we take a more restricted geographical area we encounter a higher proportion of people in which these characteristics are combined with certain osteometrical features, such as dolichocephaly, depressed malars, long face, and tall stature. That relative geographical isolation, inbreeding, or localized mutation have played a part in concentrating such a grouping is highly probable. We are at liberty, clearly, to take one of four views.

(1) One is that the present population of northern Europe was formed by the mixing of what were at one time two or more fairly homogeneous groups, of which one was characterized by a comparatively homogeneous association of those characteristics used to define the Nordic type. If it were possible to prove this view, the term "Nordic race" would have a definite historical status. Clearly such a view could be established only if race-classification were based upon purely osteometric characteristics. There is, in fact, very little reason for believing that the aggregate of characters which define the Nordic type, taken as a whole, was ever concentrated in any particular region with a closer approximation than exists to-day. (2) Alternatively, instead of regarding the concentration of this type in certain parts of northern Europe as evidence of the past existence of a population possessing greater homogeneity than any large population which exists to-day, we might regard the concentration of the same aggregate of physical characteristics in northern Europe as a stage in the formation of a homogeneous population. Clearly the plausibility of such a view must rest solely upon what opinion we hold about the future of inter-

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national communications and public sentiment, tending to encourage assortative mating. While we might foreshadow a speculative significance for a distinction between Nordic and Alpine races when we direct attention to the concentration of certain aggregates of physical attributes studied over a large geographical area, such speculations do not confer any definite meaning on the term "race," when we speak of some Scandinavians belonging to the Nordic, and some to the Alpine race. The mechanism of genetical segregation will ensure that in any freely interbreeding community all possible combinations of genes will make their appearance in the long run. Our examination of the statistical implications of any biological classification shows how important it is to establish the degree to which the existence of physical aggregates is or is not a random occurrence. The use of the term "race" implies that the frequency with which such aggregates occur takes place with something more than random assortment. From a genetical point of view, this seems to imply one of two things. (3) The first is that the attributes of a given aggregate represent different developmental aspects of a simple diathesis, depending upon a comparatively simple genetical mechanism, as is the case with a clinical classification like "mongolian" idiocy. No geneticist would admit such an interpretation to have any applicability to the problem under consideration. (4) This leaves only one alternative from the modern genetical standpoint, namely, that there is correlative assortative mating for the various attributes by which a racial type is defined. Such assortative mating might have its basis in social behaviour or in lack of homogeneity of local distribution.

As a concrete example of the extent to which association of the attributes used to define the Nordic type occurs in practice, the memoir of Lundborg and Linders on *The Racial Characters of the Swedish Nation* [5] may be cited. From a sample of 47,000 individuals, 87 per cent. were classified as "light-eyed," 8 per cent. "medium-eyed," and 5 per cent.

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"dark-eyed." The percentage of light eyes among individuals with flaxen hair was 97, among persons with red hair 89, among persons with dark-brown hair 58, among persons with black hair 48. The figures may be contrasted alternatively in the following way. In the population as a whole, 7 per cent. have flaxen hair. Among individuals with light eyes, 8 per cent. have flaxen hair; among individuals with medium eyes, 2 per cent. have flaxen hair; and among individuals with dark eyes less than 1 per cent. have flaxen hair. In contrast with this association between eye and hair colour, a negligible correlation between hair and eye colour and either stature or cephalic index is seen in the same population. It is clear, therefore, that the aggregate of attributes which are commonly used to define the Nordic type do not all show a very high measure of correlation, *inter se*, when we examine a comparatively restricted locality of the order defined by national boundaries.

According to a literal interpretation of what is meant by the term "Linnaean species," the peoples of mankind indisputably constitute a single Linnaean species. The attempt, which anthropologists have undertaken, to extend the concept of a natural classification beyond the limits of a Linnaean species, *sensu stricto*, has received encouragement from two considerations. (1) The first is that quite distinct geographical varieties can sometimes be recognized within the limits of a single species of animals or plants. (2) The second is that artificial selection has succeeded in building up very complex and well-defined aggregates of physical attributes into distinct breeds or strains of domesticated species. With regard to the first, it is to be pointed out that *homo sapiens* is the most widely distributed species on this planet. Being so mobile, human beings are less subject to the selective effect of prolonged isolation than are less mobile species, especially when we take into account the fact that the human species is a comparatively recent one in units of geological time, and still more so in genetic time-units,

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i.e. generations. Another point of importance in this connexion is that because the tool-bearing habit of the human species has enabled it to transcend its physical environment, the distribution of the human species is peculiar not only in its range but in its spatial continuity. The analogy with domesticated races naturally prompts us to ask how far natural barriers such as oceans or mountain ranges, on the one hand, and social prohibitions, on the other, have achieved what the fancier or stock-breeder can encompass by the use of cages, wire-netting, or barbed-wire fences. It is not for the anthropologist to assume that the answer is in the affirmative, but to approach the problem as one which awaits solution.

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THE SOCIOLOGY OF FRONTIERS

By W. J. ROSE

THERE are two little volumes in English dealing with Frontiers. One is Lord Curzon's famous *Romanes Lecture*. The other is a longer and far more satisfying essay published at the end of the World War by the geographer Fawcett. Important as this field is, there has been surprisingly little written on it, so that a recent American investigator of a Central European problem can rightly say:

"The discussion so far has treated boundaries from the point of view of the bounding states as space—organisms requiring a defensive epidermis, so to speak, against undesirable invaders, whether armies, smugglers, or immigrants. But this point of view overlooks the primary function of boundaries, which is to bound, i.e. to determine the limiting line on the earth's surface on one side of which all men and things are subject to the jurisdiction of one state, whereas the moment that line has been crossed everything is subject to another state. Such a line has therefore enormous significance for the lives of the people whose citizenship it alone determines. Not merely under what government they must live, or for what state they must be ready to fight and die; but even where they may sell their products, where purchase their supplies, what language their schools must use, what history, literature, and songs their children will learn, under what national, cultural, and moral influence they will be brought up—all of these are determined for millions by the exact location of an international boundary line." (Hartshorne: *Annals of Assn. of Amer. Geogr.*, 1933, p. 199.)

Not a few people are very much concerned at the trend indicated in these words, one that is relatively modern and in its extreme forms quite new. It is then needful as never before that social scientists give attention to what is one of the oldest of human institutions: to the genesis and working of

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frontiers, and to the social psychology of peoples condemned *volens nolens* to live in frontier zones.

I

Most of our civilization is built on the substructure of Latin Christianity and Roman law. No wonder that the terms we use for the tools we work with come mostly from the Latin. Through the words *fines*, *frons*, *limes* (adj. *limus*), and perhaps *limen*, we have a variety of pictures of what men thought of as the "ends" of things; down to the med. Latin *granicies*—German *die Grenze*, Polish *granica*. Akin to these seem to be the verb *krajac*—to cut, the noun *kraj*—an edge; of which the examples *Krain* (Latin *Carinthia*) and *Ukraina*. At bottom these words mean then "the Borders."

From all over the world comes proof of the sacredness attached to boundaries in every age. The Scripture, ancient Rome, the legends of India, mediæval practice and modern survivals of the same. In Upper Silesia the strips of grass separating fields are called in German and Polish *der Raine* and *miedza* (sing.). Until Prussian thrift changed them they were much wider, and of old were the object of special worship. This may have elements of exorcism in it. Speaking of Poland Znaniecki says: "To this day we find among our folk remnants of belief that the *miedza* is the favourite seat of the Evil One."

An interesting sample of folkways in this field comes from Moravia. Here the peasants have always set close to every boundary stone two tiny ones (put deeper), called "witnesses." On no account may these be removed. Should the large stone get misplaced, they are a guide to its right replacing.

Valuable data may be had in Fawcett's little book on the natural history of frontiers. The oldest distinguishing lines were belts or zones: either forest, swamp, or wilderness—anything that served as a sort of no-man's-land, over which raiders swept and on which opposing claimants often met.

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In time these were reduced, until something like a proper line was evolved. Examples—the stretch of desert separating ancient Egypt from the Fertile Crescent, instrument of her isolation; or the forest areas separating British from French North America, out of which a proper boundary was not reached till 1842. A striking case from the Oder Valley. Here the lower and middle reaches were colonized by Franks and Germans in the later Middle Ages; but their further progress was stopped by a *silva liminaris* reaching from what is now Glatz county right across to the later Russian frontier. The social and political results of this were to be felt in an especial way at the end of the World War.

All such frontiers fall within the category of “natural” as distinguished from artificial ones. On this interesting theme little need be or can be said in this paper. Natural frontiers have never fulfilled the function popularly assigned to them. Neither mountain chains, nor rivers, nor even Matthew Arnold’s—

“unplumbed, salt, estranging sea”

has ever separated peoples and cultures to the extent most of us have been led to believe. No river is ever a natural, but at best may become a political frontier. Seas have always tended to form a means of contact, not to separate either cultural or economic groups. As for mountains, closer investigation has proved that peoples do not inhabit each slope of a chain more or less up to the top; but rather do we get people of the Plains on the one hand and “Highlanders” on the other, who then tend to hold both slopes of any mountain system. The reason for this is, of course, occupational. We have the Alps as an example, large parts of the Carpathians, and the Pyrenees and the Vosges to show how unsafe it is to draw any frontier along the watershed. In the last-named the German-speaking Alsations have for centuries maintained their place as graziers on the western side of the watershed, the reason being that their own slopes are too steep to give them adequate pasture.

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There were doubtless times when every natural obstacle served as a barrier to the contacts between peoples, just as even to-day they can be a check on communications or invasions; but the sting has been taken out of all of them by the march of technical science. Indeed there is good ground for the view that frontiers of every kind are gone for ever as anything more than a symbol. What the aeroplane does not do the wireless achieves, so that an end of isolation is here. Only time can reveal the cultural significance of this for the future of world relations.

Sounder than the distinction between Natural and Artificial frontiers is that which may be said to be functional. Even this is full of pitfalls, if only because each classification overlaps the others. By and large we distinguish racial, cultural, economic, and political frontiers, and for our purposes we can leave out the first entirely. In most parts of the civilized world there are no more racial units. So too the cultural distinction in the widest sense, e.g. that of the great religions of mankind, does not concern us here. Its significance is very great indeed, but lies outside the field of this paper. In the stricter sense of national or quasi-national cultures, we are confronted at once with the extremely interesting and important matter of the identification or the reverse of this class with those set by existing sovereign states, and known as political. To this we shall address ourselves, leaving out the economic distinction, which is only functional as applied to such major areas of the earth as that of wheat, rice, or some other commodity that exerts a powerful influence on the whole pattern of living. Here too the technique of transportation has pretty well modified what was in other days an issue of no small importance.

In the case of cultural frontiers a number of vital points ought to be dwelt on. Their persistence, by which is meant their almost uncanny resistance to change. Their invisibility, in that they are emphatically zones rather than lines,

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with a striking range of nuances and gradations out of one pattern into another. Their refusal to accommodate themselves either to "natural" barriers or to state boundaries, of which curious examples can be noted the world over. The trend of our day is to take over their shaping and modification by the state and its leaders, obviously with the hope of getting what they consider a more favourable frontier than at present exists.

Western civilization can show some unexpected evidence of the way cultural frontiers, once set, tend to resist change. As noted already, the great distinctions of religion are eloquent in this respect. Take the case of Islam and Christianity, between which the frontiers have only undergone modification in such parts of Europe as were socially and politically backward, viz. the east. Again, the relative immobility of the line of cleavage set at the end of the Wars of Religion, defining the limits of Catholicism on the one hand and of the Reformed faiths on the other. Most interesting, indeed almost unique because of consequences that are keenly active at this very time in which we live, is the example of the Drina River in Bosnia, which marks the boundary between the two parts of the new Yugoslav republic—between the Serbs on the one hand and the Croats and Slovenes on the other. (This does not mean that there are not minorities on both sides of the stream.) Made the line of demarcation between the Eastern and Western parts of the Roman Empire, it continued its function of dividing the new Orthodoxy from the Roman Church: only to last to the twentieth century, and prove one of the major hurdles to be taken in the pursuit of internal harmony in the second largest of the new states of Europe.

The most obvious mark of cultural frontiers is the change from one language to another, which tends with the average man to count for more than it really should. At bottom the whole of western Europe rests on, and has never got away from, the single culture pattern of Latin Christianity as it

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stood throughout the Middle Ages. Nevertheless the Slavs call the Germans "Niemcy," meaning the folk who are dumb and with whom one cannot speak. So too the ancient expression of the Greeks for all who were outside their sphere: by the term Barbarian they probably meant the folk whose tongue could not get beyond "Ba-Ba-Ba." The sense of difference rests often on the flimsiest, though most adequate, of foundations. To my question of a learned Alsatian as to whether the folk across the Rhine would be thought of by the Alsations a generation ago as strangers or not, the answer was "Yes," but for this curious reason: "When we prepare a goose for roasting we stuff it with chestnuts, whereas they stuff it with apples!"

During my work in Upper Silesia, I had forced on me by practical considerations the question as to whether one could be a good German though not speaking a sentence of that tongue: or a good Pole under the same conditions. One might extend the issue to the French or the Italians. To the query, put to all sorts of people, I got a weird assortment of answers, certainly not throwing any light on the hope of a straight acceptance or rejection. Yet in Alsace I found folk who have never spoken French, but are French through and through. So too I have heard of Poles who could speak only Russian, but were none the less Polish in every breath they breathed. The only conclusion I could come to was that such things are possible, but they are not natural.

On the matter of the persistency of frontiers only one word more. They do move backward or forward, but chiefly under one single pressure—that of population. Witness the spreading out of the French Canadians, a solidly French and Catholic strain, both westward over the Ottawa river and southward into New England. Witness too the generally overlooked fact that the much-talked-of *Drang nach Osten* of the German peoples has long since become a matter of history. In our day it has been a purely political, and mostly artificial, thing. Actually the population thrust of the

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German people has been toward the industrialized West—of the Rhineland; with the result that the faster multiplying Slavic strains have occupied within a generation areas that were quite markedly Teuton half a century ago. That is the great concern behind schemes Prussian politicians have fostered for decades—as a rule with indifferent success.

In regard to the invisibility, let us call it intangibility, of cultural frontiers little need be said. The fact is well known that neither on the Franco-Italian boundary, nor on the Rhine, less still on the great open spaces of eastern Poland, can one draw a clear line and say, "On this side is one people, one culture pattern, one set of folkways, on that side is another!" In some cases we have gradations, nuances, slowly passing from those who look to Paris, to those who look to Rome. In others there are major conclave of detached folk, e.g. the Flemish with traces of Teuton affiliation in speech and mentality, and the Walloons whose whole orientation is French. The same is true of the large Hungarian, and even German, groups in Transylvania: of whom the latter are colonists, though not more so than the equally numerous Polish elements settled for generations in Westphalia.

The Upper Oderland is an eloquent example of the way three conflicting peoples, three state interests, and three culture patterns have struggled for supremacy at least since the later Middle Ages. There is no point in the Duchy of Teschen (as it stood under the old order) at which one could say that here Polish ceases, and over there Czech begins. Nor was there anywhere a place for German, except as the language of the authorities and the landed gentry. There were still in 1914 Protestant village congregations on both sides of the upper Vistula, i.e. both in Austria and in Prussia, who were regularly preached to in German though their daily speech was age-old Polish, while the hymn-books they used in church were Czech ones—a legacy from the days of the Slovak apostle George Trzanovski!

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The trend of our day in Central Europe is to have an end of this sort of thing as soon as may be. This may be a gain, just as what is happening in regard to all the cultural diversities of our village and rural communities is held to be a step forward. By giant strides we are marching toward uniformity whether in dress or way of speech, whether in customs or ideas. It is a commonplace that this goes on faster wherever industry sets up shop. In half-way urbanized communities the swinging into line of all and sundry is much easier. There is no more "compulsion of the mores"—sometimes it looks as if there were no more mores. For just this reason much should be done to register situations that will soon be a thing of the past, before they are gone for ever.

II

Turning to the social structure and attitudes of the groups inhabiting frontier zones, we find the latter faced with both advantages and the reverse. And first, the fact of exposure to situations and influences of which "inland" groups know little or nothing. This too has its shadow side.

No one can survey the glory of Salzburg and its environs without the reflection how lucky is the city that for a millennium has only once heard the sounds of war! Contrast it with the exposed plains of Flanders, the expanse of Lombardy, or the fields and valleys of Alsace or Silesia: and ask yourself where is the justice in things. Not only periodic devastation in respect of all that is visible, but other things that go deeper.

With every such war goes an inevitable dislocation of the functioning units of the social order, and this is felt most in the war arenas themselves. Family, commune, school, church—all are prostituted for the time to the use and abuse of intruders, and are fortunate if they escape destruction. This alone would work havoc with the continuity of institutions, not to mention what happens to the mind and spirit of the harassed generation. But insult is heaped on injury when with the shifting of political boundaries whole provinces are

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transferred from one type of control, from the culture pattern they have grown up in, to something that may be totally different. Even if and when the majority of those involved welcome the change, the element of tragedy is still there, and the consequences are not healed in a decade or two. Wholesale emigration is always an accompanying feature of such upheavals, and with this goes as a rule a corresponding immigration.

The case of Alsace is eloquent. After the war of 1870 250,000 people left the land and found refuge in France—one-fifth of the population. In their place came in an even larger number of folk from the Reich—the total is put as high as 400,000 souls. The dimensions of this change are enough to prove our point, but the sting in it lies not in numbers. Most of those who departed were Roman Catholics, and the vast majority of those who came in were Lutherans! Half a century passed, and lo! the whole process was repeated, only in just the reverse fashion. Again a notable emigration—chiefly of one class; but this time the resulting immigration was relatively tiny—a matter of 25,000 French at the most. Nevertheless, a total *volte-face* in the mentality of the people—not the thing to serve the well-being of ordered social processes.

Compare the events in Upper Silesia, notably after the plebiscite of 1921. Almost all of the Polish intelligentsia, who had borne the weight of a cultural struggle for a generation against Prussian institutions, were forced to leave the larger area left to Germany, and escape to the smaller one assigned to Poland. Thus were hundreds of thousands of Polish-speaking peasants and workmen left without leaders of any kind, without even clergy who shared their views. The same thing happened to the much smaller group of Germans left on the Polish side of the line—at least, in respect of the clergy. Here, however, the German Minority was still, what it had always been since the rise of modern industry, the upper classes as distinguished from the masses; those who owned

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and ran the big enterprises from whom all had their bread. They were the patrons of the arts and sciences, the leaders in religion and education, and, of course, in political and national life. Yet a decade has sufficed to reduce this German intelligentsia to little more than a shadow of what it once was. What happened in a few weeks in Alsace has gone on more slowly but just as surely in the Upper Oderland.

We are driven back on a new application of Sumner's great phrase about "strains toward consistency." It is the simple truth that there are in every functioning social order forces working for the elimination of what disturbs the "harmony" in things—in a word, of whatever does not conform. Dissenters are not welcome: neither in the France whose dearest wish is to achieve a high level of assimilation from the Bay of Biscay to the Rhine, nor in the Reich of Hitler with his *Gleichschaltung*. The major difference is in the ways and means used to this end. What makes all this a double tragedy for frontier zones is that every move made in this direction means the break-up of long-wrought-out *regional* balance and order, in the interests of co-ordination over larger areas; quite often irrespective of whether this process can be justified on organic grounds or not.

So much for what war does, but even peace-time is for such groups not much better. In three distinct regards the normal unfolding of social values is jeopardized, apart altogether from the jumpiness due to intermittent threats of war. Such a people has always the consciousness of being an apple of discord. They say frankly: "It looks to us as if the big powers wanted to fight out their quarrels on our backs!" That alone suffices to make nearly all folk living in such areas strong pacifists—almost advocates of peace at any price. Whatever may be the outcome of a war they stand to be the sufferers, and they have more to lose than to gain in most cases.

Further, such territorial groups are nearly always made into tools which the powers use in order to gain their own

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ends. Now being a pawn in any game is bad enough, but being forced to function as a tool for others' purposes means an end to proper relationships in the group itself. The result is constant interference from without, either to hamper processes that are needful for the community, or to stimulate what can only do harm. Here agents, there money, elsewhere even terrorization are brought into play: things of which the inland groups are innocent, and from which they are shielded by the simple facts of geography.

With this is bound up the third misfortune, viz. the extent to which frontier social groups are bound to have steadily in mind "higher reasons of state" in all they do or even contemplate, so that external factors enter perforce to weight the scales in the field of education, religion, business, and even family life—to say nothing of cultural loyalties on their political side. The sentiments of patriotism, always more alive on or near frontiers than far inland, are exploited to the limit: not seldom abused—notably in times of international tension. On the other hand, the minority groups generally found in such zones must reckon with no end of restrictions in their normal liberties, simply because they might be—often enough are—in some way interested in the high political aspirations of the Power across the border. Bound in two directions—here by ties of culture and nation, there by ties of citizenship—all such groups need the maximum of consideration from every side: yet this is precisely the thing they cannot count on.

But enough of the dark side of the picture—there is a brighter one, and one that does come out in certain happier parts even of troubled Europe. There is no denying the variety and richness of experiences enjoyed by the frontier group, simply in view of its being exposed to two culture patterns—something people far from boundaries know nothing about. Frontiers do not separate people so much as bring them together. More than elsewhere it is here that acquaintance is made with how other folk live. Here the

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contacts and conflicts of cultures are realized as being something that matters and that lasts. Not at the centre, but on the periphery of a nation's territory does one find the most outspoken patriotism: not in the capitals, but along the frontiers are born the people with ideas and the will to see them galvanized into action. Here the issues of triumph or defeat for the whole spiritual heritage are constantly put to the test.

Not without reason does German thinking to-day distinguish *Binnendeutschen*, *Grenzlandsdeutschen*, and *Auslandsdeutschen*, drawing thereby attention both to the lot of groups dwelling in the zones of transition from one more or less homogeneous pattern to another, and to the rôle they are called upon to play, whether they will or not. To mention only one phase of this, it is easy to see in Upper Silesia what a variety of social attitudes the inhabitants had and have forced upon them, the most obvious being the following:

(a) To the boundary itself—a new one since 1922, and very uncomfortable for many; something not easy to get adjusted to; sticking out as a sore thumb does and causing vexation daily to thousands.

(b) Towards the people who live just across that boundary, whether thought of *in abstracto* as foreigners or concretely as former fellow-citizens and even relatives. In this respect Upper Silesia offers a wealth of materials not to be duplicated in other such zones in Europe.

(c) Towards their neighbours inside the frontier, who are, however, not of their own national persuasion—being members of a Minority—and so are at best rather unwelcome guests in that they occupy land and do work that others would like to have.

(d) Towards their nation as a whole—by which is meant the great mass of folk living “inland,” going their daily round blissfully unconscious for the most part of all that is for the frontier dwellers a source of concern and at times of disturbance.

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It is undeniable that most Upper Silesians, no matter what their national affiliations, are hostile to the new boundary—or indeed to any other that divides their land into two parts. The usual reason given is that it has made difficult all intercourse between families where before it was easy. This type of objection will largely pass in a generation, but others go deeper, having to do with the injuring of a beloved institution or a cherished enterprise. A rooted dislike to the idea of a frontier at all is found in the view widely prevalent that Upper Silesians represent a single people and ought not to be separated. One part of those holding this view would have given the whole land to the new Polish republic, the rest would have kept it all for Germany. Realists see that neither of these things was possible, and accept the boundary as a necessary evil, adding that such as are not satisfied on one side should move to the other.

Observation convinced me that the majority of those living right on a frontier, even a new one, quickly become accustomed to it, and make little more of it than they do of the fence between them and their neighbour. Equipped with local permits, valid for a year, they cross and re-cross the magic line daily in pursuit of their tasks on farm or indoors; and only in time of political tension is this freedom in danger of being curtailed. In a densely populated region, and particularly during the stress of hard times, the temptation to smuggle—or at least to assist those engaged in that pursuit—is all too great, and no week will pass without its tragedy “on the green boundary” when some unfortunate is hurt or even killed in a tilt with the watchmen. The evil effect of this practice on the morals of frontier communities is a matter of common knowledge all over the Silesian industrial area, but we cannot do more than mention it here.

Now for the group attitude toward the stranger, i.e. the neighbour nation. Of this, a searching study has been made by Znaniecki of Poznan, which ought to be published in English. The theories of Gumplowicz and Ratzenhofer, as

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a rule called those of racial basis of antagonism, are shown to be inadequate in modern times. In general, no group solidarity formula will suffice—e.g. Giddings' "consciousness of kind"—to explain the essence of the togetherness of the "in-group" and its antagonism to the "out-group," partly because there is a suspicion of begging the question. In particular it will not do to say that folk are strangers, and so enemies, if and when no tie binds them. The diversity and number of ties are very great, and nothing is commoner than for these to cut right across one another in the modern world.

Znaniecki rejects psychological approaches in favour of sociological ones. He insists that a sense of antagonism presupposes some contact—we cannot be hostile to the people who live in Mars! Next, there must be some difference, though this of itself by no means involves antagonism: witness the intimate relations between whites and coloured people under the old régime in the south. What one must have in addition is a drawing attention to differences, emphasis on them, even a magnifying of them. Thus does the question no longer take the form "What folk are strangers to this group or that?" but rather this: "Under what conditions are people of this or that group or class experienced as strangers by a given person or group?" Contacts are meaningless unless they are conscious ones—let us say, purposeful. There will be at stake then one matter: whether those in contact have common spheres of action and common systems of values. Somewhere here are the data wanted by the sociologist, and Znaniecki's thesis is stated thus: the object of experience is conceived of by the subject as a stranger only when social contact has been established between them on the footing of opposing systems of values. Since these latter change, or under changed conditions are not operative, what were hostile relations yesterday can become the reverse to-morrow.

The essential feature of this approach is the denial that any visible criterions can be established as always registering

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antagonism or the reverse between two groups. By the same token there is no place left for indifference as a *tertium quid*; so that the author differs from Vierkandt on a major issue.

Armed with this measuring stick the student of Upper Silesian conditions will get much nearer the truth in the complexity of attitudes and relationships he will encounter there. From the start any hope of alignments on racial lines must be abandoned. For thirty generations there has been unbroken mingling of stocks—German and Slav for the most part, though not exclusively. Along with this has prevailed a curious measure of isolation, rare enough in Central Europe: due in part to the nature of the soil—light and unfertile, low-lying and swampy, and with an uncongenial climate. Add to this the mountain ranges to the south and west, and the already mentioned *silva liminaris* to the north, and one sees why the Upper Oderland remained singularly uninfluenced by cultural and economic forces that transformed neighbouring lands. As for the east, during the whole nineteenth century it was Russia, whose frontier was sealed with seven seals, and whose whole outlook was said to be Asiatic.

Precisely this isolation contributed to the creation of something as near to a *Zwischenvolk* as Europe offered. Two things bound them to their long-since-severed mother-state of Poland—speech and their Catholic faith. Here the memories of Our Lady of Czenstochowa—the Lourdes of Poland—and the close ties with the university of Cracow counted most. Until a century ago most of the plainland of Upper Silesia was still a part of the diocese of Cracow. On the other hand, two mighty forces arose to identify this people with the German West: those of administration in all its forms—first the looser ones with Austrian Vienna, and then the firmer Prussian ones with Breslau and Berlin—and those of business and industry, which lifted Upper Silesia during the nineteenth century out of oblivion into a high place in German interests and aspirations. Nevertheless, through all this the

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mass of the people dwelling in this plainland east of the Oder (as well as a good few west of the stream around Ratibor) remained what their fathers had been—"Silesians." They dubbed all Germans—especially Protestants—coming into their midst "foreigners," showing all the hostility and suspicion that Frederic himself had foreseen. Far from being grateful to those who developed mining and foundry plants and made possible the quadrupling of the population in half a century, they resented their presence as intruders.

It should be added that the common people regarded as "foreigners" their Polish-speaking fellow-workmen who came in from Poznan to the north, though they were Catholics like themselves and had shared the Prussian overlordship for a hundred years! By the same token they viewed all who came from the lands to the east as "Polaks"—an attitude that was encouraged by the Prussian authorities for political purposes, but did not originate with them. Thus we have all the raw materials of a cultural Regionalism—to which we shall revert below.

Our point here is just this, that there is to-day no more antagonism to the people across the new boundary than there was before toward both those who belonged in the German world proper and those who belonged in Poland. It seems clear that in spite of the handicap of language and the opposition of religion the Upper Silesian world would have been assimilated with some success into Germandom (just as Lower Silesia had already been won) had it not been for the utter inability of Prussian leaders and Prussian strategy to win anybody to anything. The measure of success that was achieved was mostly on economic grounds—*ubi bene ibi patria*—and because the alternative in pre-war days was to belong to Russia. This failure left the Upper Silesians in a tragic position, one of serious cultural lag, of startlingly arrested development. This was put a generation ago by one observer thus: "The people of the upper Oderland are Poles, but Poles as of the end of the fifteenth century."

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Apart from their daily bread these peasant and industrial folk had no common systems of values with their German conquerors. There was a complete lack of anything like what happened in Alsace, which made of that people, German-speaking as they were, allies and friends of France for ever. I refer to the common cause made in the 1790s—those days of high hopes and hot enthusiasms, when the masses made common cause with those of France, and Strassburg gave that cause its rallying song. Further, such Upper Silesians as were willing to be called *koenigstreue Preussen* were known by thorough-going observers to be mostly materialists.

A group will welcome assimilation when in respect to some value or system of values it becomes conscious of what another, usually more dynamic and larger, group has to offer. It then moves to replace what it has lived by until now with what the new set of values offers, making at the same time the first of a series of adjustments. No apter expression of this has been formulated than the famous one of Emerson about the inventor and his mouse-trap. Only the trap must be explained to the customer—in American parlance it must be “sold” to him.

III

It is in frontier zones that the ordeal and techniques of assimilation, whether as an idea or an ideal, can be studied best. In this tussle titanic forces are ranged against one another to-day, and the issue is nowhere certain. As Weber has pointed out, the hopes of assimilating border peoples have become slight since the common school and the printing-press have put tools into the hands of all. Never was it so easy for any regional group to nourish an awareness of its distinctive qualities by way of contrast with those of the larger (national and state) unit that seeks to envelop it as at the present. All that Vierkandt means when he speaks of the basic spiritual fellowship that is the essence of “conscious-

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ness of kind" can now be implemented in ways undreamed of by our forefathers, so that the defences of any people against being absorbed are virtually impregnable. Nevertheless, the tendency revealed in the opening quotation of this paper cannot be ignored; and the rôle of the state as warden and champion of unity and co-ordination within its borders is at the moment waxing rather than waning. New techniques of assault and siege are being evolved: of a truce there is no thought. Only time can tell what the upshot will be, and each several struggle will be waged in its own way.

All the categories of attitudes referred to above as characterizing frontier zones will play their part, and will thus become the object of special attention on the part of the social scientist. Here one, there another, will be found to dominate the scene, contributing to the peculiar social structure more than its share. So too in the same area one kind of relationship will colour the whole structure for a decade or a generation, only to be replaced unexpectedly by another. In the course of any enquiry three special issues are likely to emerge, to be named in concluding this paper.

First. In so far as an area in question is treated as if it were a "colony," the question whether the strings of its economic, cultural, and political existence being held outside the area (so that the evil of absentee ownership and control is at its zenith) does not preclude the possibility of normal processes of social and cultural development altogether.

Second. What hopes can be seen of such frontier groups playing in deed and in truth the part of mediators, thereby becoming not buffers but bridges? Better said, what kind of a part they will be allowed to play, and what must be cleared away before their voice can be heard?

Finally. Whether regionalism in its own right should survive, and what kinds of regionalism? There was a day when out of regional affinities grew normally national ones, and the process was welcomed. Is it to be welcomed to-day,

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or rather to be frowned on—and why? Again a problem which only the social scientist can answer, and perhaps only tentatively, and with a distinct answer for each several case to be tried.

A parting suggestion. In the main we accustom ourselves to "taking up" any issue when it "is pressing." That is the way of the journalist, even the best journalism. In other words, the matter must be "hot" or else no one will touch it. Now that is just what the social scientist must not do. Not when things are heated by the focusing of popular attention, but rather when they are cool, seemingly neglected, is when they can be handled. The goal is indeed action and not contemplation, but before action goes diagnosis.

SOME ASPECTS OF PAPUAN SORCERY¹

By F. E. WILLIAMS

THE subject of sorcery, which I am going to speak about as I know it in Papua, may be viewed in various aspects according to our predilections. In this paper I propose to deal briefly with three of them. Firstly, there is the *Psychological* aspect: What does sorcery mean to the man who makes it? What is his intention? And what, if he were capable of examining the question, would be his theory of it? Secondly, there is the *Sociological* aspect: What part does sorcery play in the social life at large? What are its effects on other social relations? Thirdly, I wish to say something on what we may call the *Practical* aspect: How should we assess the value of sorcery, and what attitude should we as a governing people take toward it? If we decide that it is undesirable and bad, are we entitled to take any steps to eradicate it? And if we are, how should we set about our task?

I

Now, sorcery is a department of magic at large. It is marked off from the wider field by the fact that it has an anti-social purpose. Or, if you think that the word "anti-social" begs one of the main points at issue, we had better say that sorcery is magic that is meant to do *harm* to someone or other. In the sense in which I use it the word is synonymous with Black Magic. It is an inclusive term: I do not see fit to make any distinction, for instance, between sorcery and witchcraft.

If sorcery is thus a department of magic, delimited merely by the nature of its purpose, then to start at the beginning

¹ Paper read before Section DA, International Congress of Anthropology, London, August 3, 1934.

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we should examine the psychological aspect of magic itself. Now, in thinking over the subject and making due comparisons I have reached the conclusion that we are all of us very much magicians at heart. For it is rather generally agreed, I understand, that magic is a kind of wish-fulfilment. To state the matter somewhat more fully, I would say that magic is a symbolic (sometimes very sketchy) representation of a wished-for result, performed in such a manner, usually with certain aids, as to support a belief that it actually brings about the result. The magical representation is thought to compel the reality.

Now, in its most elementary form magic need not rely upon those aids which surround it in its more developed form. I do not say that the fabled ostrich is deliberately practising magic when he buries his head in the sand in the hope of remaining invisible. But in that notion you have the fundamentals. I remember a place of the dead in the Orokaiva country, a mysterious lake haunted by the ghosts. It was felt that there was danger to the women and children who passed this place. But they had to pass it on the way to their gardens, so they would scurry by with heads averted and shielding their eyes with their hands. In fact, they dared not look, though the danger was, of course, not in seeing, but in being seen. Like the shrewd ostrich, perhaps, they were taking care not to see in their anxiety not to be seen.

On one occasion, somewhere about the same time, I was manipulating some photo-plates in a changing-bag. A changing-bag in the tropics is an awkward thing, as uncomfortable as a gas-mask. You look into its collapsible interior through a slit bound tightly up to your eyes, and the only light which enters the bag should come through a red window. But while I was changing my plates I became aware of a puncture through which there shone a thin shaft of devastating white light. It was my reaction which revealed to me the fact that I was as much a magician or an ostrich as any of them, for I immediately shut my eyes.

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This I call a piece of elementary magic. Now, magic as we see and study it usually has a history, perhaps a long one. But I hold that from time to time, at any moment in fact, fresh magic springs up. It has no history; it is unique; it is just a flash of magical imagination. It is what I have ventured to call *Spontaneous Magic*.¹

To give you one or two examples. I once possessed a very fine upstanding dog—of mixed parentage indeed, but the pride of his master and the admiration and envy of every native village. And I remember in one village a little native bitch in pup, or whatever the phrase is, and how her master asked permission to pluck a few hairs from my dog's back to mix with his little bitch's porridge, so that the family she was shortly to produce should have some of his characteristics.

And I remember a Morehead native sneaking bacon-rind from my cook—to which he was, of course, very welcome—in order to feed it to his own captive pig, so that when the latter was presently killed its flesh should show lean and fat in just proportions like the Australian bacon he so much admired.

Again, you may have read how the fin of a certain swift fish or the claw of a cassowary is bound secretly into the *lakatoi*, or trading vessel of the Motuans. It is a piece of typical magic, to make the *lakatoi* correspondingly fast. But a certain Motuan, Ahuia, who is probably an old acquaintance of Dr. Haddon's, confided to me a new and more effective trick. He had obtained a piece of an aeroplane—I forget exactly how he got it—and this he had bound into his *lakatoi*, so as to impart to it some of the speed of the amphibian which he had seen tearing across Port Moresby harbour.

These that I have given you are examples of *Spontaneous Magic*. Such magic may fizzle out, or it may survive. The methods and materials used may be handed down; they may come to constitute set recipes; they may in fact become what I call *Conventionalized Magic*.

¹ *Orokaiva Magic* (Oxford University Press, 1928).

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Now, as I said, most of the magic that we study is of this conventionalized kind, and during its history it has gathered certain accretions. These are in the nature of aids to the magical representation; often they are regarded as absolutely essential to the success of the process. In Papua, at any rate, they most commonly take the form of leaves, roots, barks, etc.; and I have suggested elsewhere that in many cases these "medicines" (as they are commonly called) were originally magical symbols, that they possessed some fitness for the matter in hand which suggested itself to their original users but which has been lost sight of in the process of transmission, so that all that now remains is a blind faith in their powers. In other cases the efficacy of the object used as an aid may have been due to certain intrinsic properties, to its mere rarity, or to some uniqueness in its shape—as in the odds and ends, the "charms," found in a magician's bag. Or, again, as very commonly in Papua, their power may be due to their heat-producing properties, or their strange flavour, and so on, as in ginger and the aromatic barks which are chewed by the magician and spat on the magical mixture. But whatever their original justification it has probably been altogether lost sight of. Such medicines and charms are now used, as I said, with a blind faith in their powers. They are regarded as necessary to set up the action. Using a metaphor from school-boy chemistry, I have called them *catalytic agents*, or *magical catalysers*.¹

So far I have said nothing of the spell in magic. While spells or formulæ of one kind or another run through most of the magic we study, I think it is obvious that the spell is not essential to all magic. Of course it may be present at the most elementary stage, when, I suggest, it consists merely of putting our wish into spoken words. In the course of transmission the formula may come to be regarded as possessing power in itself, and perhaps at the same time it may pass into unintelligibility and be used merely by rote. And then like

¹ *Orokaiva Magic* (Oxford University Press, 1928).

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other aids to magic it may be regarded as absolutely essential to the success of the process of which it forms a part.

I have no time to deal with the various forms of the spell which I have encountered, with the use of secret and sacred names, with the references to mythology, or with the Magic of Impersonation¹ and the appeals, approximating to prayer, which the use of mythological names implies. But these, like the medicines and charms I have spoken of, are amplifications which belong typically to Conventionalized Magic. To reach an understanding of the psychology which lies at the *base* of magic we must, I think, go right back to the Spontaneous examples. They are, I believe, truly said to be rites of wish-fulfilment, symbolic representations of a wished-for result, and these amplifications are in the nature of adventitious aids to make the rite effective and the result certain.

If, now, this is the real intention of elementary magic, viz. to achieve a result by representing one's wish as fulfilled, then we must recognize that it is a very human and excusable weakness, for the best among us probably feels now and again some temptation to yield to it. But it is none the less a grievous mistake on the whole when viewed from the standpoint of soundness; and one of the prime purposes of education is to guard us against this magical way of thinking and acting. Our accumulated knowledge does a great deal to keep us on the right way; and we are to a comparatively great extent schooled to discipline our minds, adopt a critical attitude toward ourselves, and to realize that thinking must not be governed so much by wishing nor action by whims.

II

So much for the purely psychological side of magic, which covers sorcery as one of its great departments. Now, secondly, let us consider sorcery in particular and its effect on society at large.

¹ See article on "Trading Voyages from the Gulf of Papua," in *Oceania*, 1933.

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I wish, first of all, to draw attention to the fact that sorcery is not really practised to anything like the extent it is supposed to be. It is, in fact, very largely a matter of fear and false imputation. There is no doubt that sometimes it is put into actual practice, though on reflection we shall see that we have very little trustworthy evidence available that this is so. That is to say, unless you can spy on a sorcerer actually engaged in his rites, you have only his word, or somebody else's, that he really does the work. Without doing it, however, without even needing to do it, he can pretend or threaten to do it with the same effect; and this is certainly a frequent phenomenon in primitive society. Again, whether he practise or pretend, or whether he does neither, there is everywhere the suspicion and fear that sorcery is abroad. The belief in it, indeed, appears to be a universal phenomenon in primitive society—at any rate Papuan society. Imputations are correspondingly rife—albeit in the vast majority of cases unfounded.

One might represent what I mean graphically. Imagine a wide circle, meaning the belief in sorcery, the fear of it, and the readiness to impute it: this covers the whole of any primitive Papuan society. Imagine within it another circle, meaning the pretence of sorcery or the threatening of it, what we may call *overt* sorcery: this will cover only a fraction of the first. Then imagine a third circle meaning the practice of sorcery: this last will cover only a fraction of the second.

Regarding the last-mentioned, the practice of sorcery, we need not greatly concern ourselves in considering the general effect of sorcery on society. If a man really does it *in secret* then he does no harm.¹

But when the sorcerer opens his mouth or gives any other intimation that he is practising his art (and whether he does

¹ I exclude the use of poisons, about which there has been a good deal of rather idle talk, from consideration in making this statement, because it may be generally excluded from the concept of sorcery.

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so in fact or not is of no practical consequence), then the case is different. He then becomes an object of special respect and fear; he wields a power to inflict harm. Overt sorcery, for good or evil, certainly has very marked effects on social relations at large.

The sorcerer's motive may indeed be defensible. In behalf of sorcery we may always make this strong claim, that it is one of the accepted sanctions of morality. Stated baldly, this means that you refrain from injuring so-and-so for fear he may sorcerize you. Thus the motive of the sorcerer may sometimes, or may conceivably, be one of just retribution. I must say, however, that in the majority of cases I have studied personally the motive turns out to be one of spite or greed or revenge, or if of so-called just retribution, then of retribution for an imagined offence, something of which the sorcerer's victim is altogether guiltless.

It may be, again, that the sorcerer's motive is that of sustaining or consolidating the power which belongs to a certain social status. Sorcery may be the speciality of a special class, that of the chiefs, for instance. This is indeed, to some extent, the case in the Trobriand Islands, where there is a highly developed chieftainship; but as I am speaking of Papuan sorcery at large as far as I know it, I must dismiss this as a special case. In the typical Papuan situation sorcery, which is indeed highly developed, has a distribution out of all proportion to the meanly-developed institution of chieftainship.

So much, very briefly, for the effects of overt sorcery, which whether it imply real practice or not is a force to be reckoned with. What now of the effects of the universal belief in and fear of sorcery? The prevalence of this belief is witnessed by the fact that sorcery is made typically the cause of sickness and death, so that some have ventured the generalization that no Papuan native is believed to die naturally; though it would be rather more safe to say that no native dies but someone thinks his death due to sorcery.

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Granted the universality of the belief, this is indeed to be expected. Feelings of sadness and bereavement readily induce a sense of injury, and this is intensified by the excitement which attends the mourning ceremonies. It is not unnatural in these circumstances that highly charged emotions should demand an outlet, and that the general sense of injury and resentment should be focused upon some individual, the imputed sorcerer. The belief in sorcery as the cause of death thus provides an outlet for pent-up emotions, and incidentally it satisfies the puzzled native's intellectual craving for the true cause. But whatever emotional and intellectual needs the belief in sorcery may meet in this manner, it is also true that it paves the way to further trouble. To the sorrow of bereavement is added a bitter sense of injury, and the angry mourners may proceed to sorcery of their own, or perhaps to open revenge by violence.

Making due allowance for the parts played by sorcery as a sanction of morality, as a support of the *status quo*, and as providing an emotional purge, I would maintain that its principal effects are to spread suspicion and enmity through and through society, to allow the few to exploit, blackmail, and tyrannize, and to keep the many in fear. Apart from any concrete examples of exploitation which may occur, it is this mutual distrust, evinced by everlasting false imputations, which is the outstanding social result of sorcery. Sorcery, indeed, is a perennial fount of hatred and ill-will.

III

Now I come to the third aspect, viz. the Practical one. Hitherto I have offered no opinion on the normative aspect of this matter. I will ask you to note that these conditions in any society are matters for objective observation. Any ethnographer will be able to see and record such things as distrust, suspicion, vengefulness, and ill-will generally; and he can do so without committing himself to any condemnation of them.

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For my part, however, I do not propose to be picky on this question. It seems to me that one of the soundest criteria for judging the well-being, or the success, of any society is the measure in which its members contrive to get on with one another. The supreme social art is the "Art of Living Together." Native societies certainly do not, comparatively speaking, fall short by this criterion; but, like every other society, they fall far short of perfection. I submit that at the primitive level sorcery, or more importantly the belief in it, is one of the main obstacles to successful living together. No less an authority than Professor Malinowski has vouchsafed a judgment of value on sorcery. He has said, "Sorcery on the whole is a beneficent agency, of enormous value for early culture" (*Crime and Custom*, p. 94). With this precedent I feel at liberty to express my own judgment of value, and with all due deference it stands in direct opposition. The effect of sorcery, I believe, has been, and is on the whole, for bad.

If this be so, the question arises whether we are justified in interfering to get rid of it. Shall we really benefit the native by trying to get rid of sorcery, or may we perhaps on the contrary do more harm than good by interfering? None of us wants to wreck any native culture entirely; and the question at issue is really whether sorcery must be regarded as inseparably bound up with the rest of the culture of which it forms a part; whether it plays a really vital and indispensable part therein.

It is true we cannot change any part of a culture without changing the whole, any more than we can subtract 1 from 100 and leave 100. But culture is a very hazy and elusive thing. For my part I cannot envisage it as a thoroughly integrated or organized whole. It seems to me indeed a going concern; but one that lacks complete or precise organization. It manages to "make room" for all sorts of additions or innovations; and when losses occur, as they sometimes do, it manages to pull itself together and continues to shuffle

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on. At any rate, it seems a highly adaptable thing, one that can suffer changes, even drastic changes, and survive. When such changes occur in a culture, as they do constantly before our eyes, we do not see a wreck or a stoppage of the works, as if some essential working part had been removed, or as if a spoke had been thrust into the machinery. We see, on the contrary, an adjustment, more or less difficult, and off she goes again—the same culture with a difference.

The change (and whether we like it or not change will occur) may be for the worse or it may be for the better. To come back to sorcery, we may look forward to the time when there will be less of it in the native societies with which we have to deal. And I do not think I am over-sanguine in suggesting that they will succeed in adjusting themselves. Further, and candidly, I think the less they have of sorcery the better off they will be.

I think then that we are justified in helping native society to free itself from this evil. But we shall be well advised to proceed slowly and considerately. The only sound means in the long run is that of education, with its promise of a better realization of facts and a better interpretation of them, and a new discipline of mind. We shall never get rid of magic entirely, for as we have seen, it is in the nature of a weakness to which the undisciplined mind is continually subject. But with the process of education we more and more gain control. It seems to me particularly idle to point to modern superstitions and exclaim that we cannot cure natives of their magic when we practise magic ourselves. Whatever our lapses, we have in this respect, at any rate, achieved an immense advance over those primitive societies where magic and sorcery are the order of the day. Sound education will inevitably lead to straighter thinking; the belief in magic will recede, if it never entirely disappears; and as the belief in magic at large recedes, the sorcerer will more and more find himself out of a job. In particular when the native learns to attribute death to natural causes instead of to the ill-will of an imputed

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sorcerer, it will be like throwing a weight off the back of society.

In concluding, I should like to touch briefly on a controversial subject, viz. that of punishment as a deterrent against sorcery. To speak plainly, I think there has been some undue squeamishness on this subject. Education, as we have seen, is the ideal means. But, alas! we shall have to wait a long time for it to take effect; and, while we are waiting, sorcerers will continue to ply their trade, to extort and intimidate, to impose upon the weak. Governments will assume the responsibility of protecting the weak against such imposition, and it is my conviction that they are justified in using punishment as a measure to prevent it.

I would ask you to remember those three imaginary circles. The widest comprised all those who believe in sorcery. We do not punish people for believing in sorcery. The smallest circle comprised those who actually practise it. We do not punish people for practising sorcery—provided they keep quiet about it; for if a sorcerer keeps his mouth shut, then for one thing he is doing no harm, and for another there is no evidence to proceed on. But there is that intermediate circle comprising the *overt* sorcerers, those who pretend and threaten. Once a man gives out that he is practising sorcery he begins to do harm to others and he provides evidence against himself. In short, he lays himself open to punishment.

There are, I admit, some difficulties. By thrusting sorcerers in gaol the Government may appear to be admitting a belief in sorcery; and an inadequate punishment may serve as an advertisement rather than as a deterrent to the sorcerer. But these are difficulties and misunderstandings which with propaganda and with the support of progressing education can be removed. The purpose of punishment itself is at bottom educative. In this case it is to convince the sorcerer that it is not worth while continuing in his trade, in fact to make it psychologically impossible, or at least

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increasingly difficult, for him to practise open sorcery on a future occasion. Adequate punishment will either make a man give up sorcery altogether or force him to practise it in complete privacy. If he adopt this latter course, then for all the harm he does to others we can let him go to it.

The punishment of overt sorcery is a temporary expedient, pending the happy, if far-distant, time when wider education may make it unnecessary. But as an expedient I think it is morally justified, and Papuan experience goes to show that it is practically effective.

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SOCIOLOGY. By Morris Ginsberg. *Thornton Butterworth* (Home University Library), 1934. 2s. 6d.

Being a philosopher as well as a sociologist, Professor Ginsberg is, here as elsewhere, concerned to define the scope of sociology and exhibit its relations to other departments of knowledge; accordingly, he devotes his first chapter explicitly to these ends, and in the second chapter amplifies his efforts by discussing some fundamental sociological terms such as Society, Culture, and Civilization. He then proceeds to develop his main argument, which is perhaps best summarized in the words with which he introduces it (pp. 52-53). "Chapters III and IV examine some of the conditions governing the life of communities, the former being devoted to a study of the influence of the physical environment and of race, and the latter to a psychological analysis of those elements in human nature which bear most directly upon the relations of man and man. The discussion which follows seeks to give some account of the various forms of social relations. . . . Chapter V deals with the general principles of social organization, as reflected in the growth of political communities, and with the various types of social control. Chapter VI is concerned with class structure and economic organization. Chapter VII discusses in very brief outline the principal trends of mental development, in the field of morals, religion, and science. The concluding section raises the problem of the relations between these different spheres of social life, and indicates the future tasks of sociology."

One thing that is very obvious from this outline of Professor Ginsberg's argument, and is very forcibly impressed upon the reader by the argument itself, is the vast and comprehensive scope of sociology. This is clearly recognized in Professor Ginsberg's own definition, according to which (pp. 17-18) sociology is concerned (1) with the morphology of social relationships, (2) with the relations between the different factors of social life, and (3) with the fundamental conditions of social change and persistence, attempting, in friendly relation to the other relevant specialisms, "to pass from its preliminary empirical generalizations to the more ultimate laws of biology and psychology, and possibly also to distinctively sociological laws." Nor can it be questioned that, on any view of its scope and aims, sociology must inevitably concern itself with a wide range of topics and overlap to a considerable extent with other sciences. But Professor Ginsberg's argument seems to do more than this, not merely making use of the results of other sciences and standing in friendly relations to them, but actually dealing with their problems in the same

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kind of way as it would if it was professedly concerned with them. In any case he deals with so many problems in his 250-odd small pages that most of his discussions are very compressed, and in consequence are unlikely wholly to satisfy either the popular readers for whom the Home University Library is designed or the better-equipped readers for whose benefit he is in the habit of writing and lecturing. Readers of both types will of course derive much profit from his argument, especially from those parts of it which deal with definite and not too general topics like race and social class. But it is difficult to resist the impression that in many of his discussions the language is too technical, and the illustrations too few, for the inexpert reader, and that his arguments are often not developed at sufficient length, or supported with sufficient statistics and other detailed evidence, for the expert one. Moreover, it is permissible to suggest that his initial discussion of what sociology is, which is perhaps less open to these objections than any other part of the book, is really somewhat out of place, or at least that it occupies valuable space that might be devoted to other matters. No doubt the question is an important one, especially to those who are becoming acquainted with the subject for the first time ; and if it is to be discussed at all, it is desirable that it should be discussed with the intelligence and thoroughness that Professor Ginsberg brings to it. But it is perhaps more suitably discussed at the end than at the beginning of a sociological study ; at the beginning we need not have a clearer answer to it than is involved in saying, as we can say without discussion, that there are a number of problems concerning society which are not dealt with by the already existing social sciences, and amongst which must be included problems concerning the relations between those sciences, both in themselves and in their methods of dealing with such questions as enter into the subject-matter of more than one of them. After all, it is not by discussing what they are doing that scientists advance the progress of their sciences, but by doing it ; and it is difficult to believe that Professor Ginsberg's main argument would lose in value if it were deprived of its connexion with his first chapter.

To say these things, however, is to say no more than that Professor Ginsberg's task in writing a book about sociology for the Home University Library must have been a very difficult one indeed ; and if he has not altogether succeeded by his methods, it is doubtful if any other methods would have been more successful. Certainly his book has many of the qualities that are essential to success. As should be suggested by his summary of it, the argument has a very definite continuity and structure ; and it cannot be questioned that he is, as much as any one man could be expected to be, at home in all the departments of knowledge that are

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relevant to his task, as well as having the ability and penetration of mind without which no knowledge could be effective. Moreover, all his discussions, and not least those which deal with matters of acute political controversy, are characterized by the caution and fairness which we have learnt to expect from him and which are essential to the scientific treatment of the very various topics with which they deal. For all these reasons the careful reader, whether he is a plain man or a sociologist and whatever he supposes sociology to be, cannot fail to find in the book much that is of interest and value.

O. DE SELINCOURT.

DYNAMICS OF POPULATION. By Frank Lorimer and Frederick Osborn. *The Macmillan Company*, 1934. 15s.

It is difficult to give this work sufficient praise. It accomplishes what it sets out to perform with complete competence. Moreover, the subject is among the most important, if not the most important, of all sociological problems which have an immediate practical bearing to-day. The book belongs to the type which sets out to notice and review under one cover all the more recent research relating to a broad problem. Such books are useful when they are little more than guides to literature. They may assume a greater usefulness in two ways. The author may, by reason of a thorough acquaintance with the methods and details of research in the chosen field, be able to assess the validity of the various investigations. He may also, by virtue of possessing judgment and a power of synthesis, be able to show how the various topics investigated are related to the whole. But it is rare to find an author or authors who are accomplished in both ways. What is remarkable about this work is that the authors exhibit the highest critical power in detail as well as the most balanced judgment and capacity for constructing a picture of the problem as a whole. To this it should be added that they do not limit themselves to taking the work of other persons into account. Though they present no new data, they have worked over the data given by certain investigators and have extracted from it some additional results of significance. For example, valuable results have been obtained by working over the material collected by Katherine B. Davis, and therefore the book also contains some notable original work.

The book falls into four parts: (1) population trends, (2) measurable characteristics of groups, (3) the influence of differential fertility, and (4) the causes and control of population trends. In (1) we get a summary of the trend of population as a whole, followed by an examination of trends in relation to size of community, to race, and to occupational and economic groups. In (2), group variations in relation to health and physical

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development are first noticed, and then comes an exploration of cultural-intellectual variations among racial and occupational groups. The authors find little evidence of consistent variations in respect to physical characters as between the groups, and though there are signs of wide variation as between social groups in regard to cultural-intellectual development, in all cases this variation is associated with differences in occupational status and regional location. Thus there is no evidence of racial differences in intelligence as measured by intelligence tests between any of the groups. (3) is remarkable for what is perhaps the most balanced summary yet made of the biological significance of differential fertility. They incline to the view that the lowest social groups stand below the middle classes in respect to average hereditary capacity for intellectual development. They further think that there is some evidence for a general hierarchy among broad social groups in respect to this capacity. In (4) there is a most illuminating discussion of the forces at work which are producing the present state of things. In their view voluntary limitation is the main factor at bottom. Any effort to restore the reproduction of groups to replacement level must aim at producing a sense of financial security and must encourage early marriage.

The authors are concerned with the problem of population as it presents itself in the United States to-day. Though they occasionally use data from other countries for comparative or illustrative purposes, they mainly employ American investigations; and the forty pages of bibliography are mostly filled with American references. While the population position is fundamentally similar in all Western countries—exhibiting the tendency of fertility to dip below replacement rate and the phenomenon of differential fertility—it differs much in detail from country to country. In America it is present in its most complex, and potentially in its most illuminating, form; there exist in America, for example, social groups, or, more properly speaking, groups differentiated in respect to national origin, and the possibility is opened up of investigating such differences. That the Americans have seized their opportunity is evident from the large amount of excellent research and from this admirable summary of the results so far achieved.

There is need in every country for work of this kind. The statistical position varies from country to country, and in every country it should be investigated, if possible, on some standardized basis in order to make comparison easy. So much is obvious. It is also clear, though less widely appreciated, that there may be, and almost certainly are, very interesting and important differences in regard to other matters. It is probable that occupational classes are not everywhere similarly differentiated in respect to endowment. It is certain that the social forces at work differ

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much from one country to another, and that the same force impinging upon different traditions does not everywhere produce the same results. Little or nothing is known about the effect of family allowances upon the birth-rate; there is no sufficient explanation of the persistence of differential class fertility in this country and in America, and of its disappearance in certain countries or at least in certain towns of continental Europe. In this country we take pride in the excellence of our vital statistics, but we have no reason to congratulate ourselves upon the use we have made of them, or of the extent to which we have pushed our investigations into the other fields of population research.

A. M. CARR-SAUNDERS.

HEREDITY AND THE SOCIAL PROBLEM GROUP. By E. J. Lidbetter. Vol. I. *Edwin Arnold & Co.* 21s.

This book is the product of more than twenty years of research into the pedigrees of a number of families in a district of the East End of London who are chronically in receipt of assistance from public funds. It is the first of a number of volumes and the final statistical analysis, together with the author's conclusions, is reserved until the last. In the volume before me there is a brief account by Mr. Lidbetter of the magnitude and vicissitudes of his undertaking and some preliminary remarks concerning the objects of his investigation. This is followed by twenty-six pedigrees very fully annotated.

It is not easy to discover what Mr. Lidbetter's objects are. From the title of his book one concludes that he is investigating the influence of heredity upon the liability to become a charge upon public funds. On the other hand, Major Leonard Darwin in an introduction refers to Mr. Lidbetter's belief that a large proportion of public assistance is due to "inherited defect" or "if not hereditary, is yet found repeated in the children and grandchildren of defectives." If the author's object is simply to show the recurrence of certain defects in certain family pedigrees, this should be clearly stated in the title of the book. Theoretically, the close association of certain traits with certain families can be attributed with equal justice to the persistence of a similar environment. The British royal family is, in a different sense, chargeable to public funds. But this fact is not due to any genetic mechanism, but to the legal arrangements whereby family descent is in this case associated with the privileges of royalty.

At present genetical science only permits us to detect the existence of defects or metrical characters which can be observed to conform to the statistical requirements of Mendel's laws. Many of the diseases and so forth which Mr. Lidbetter includes as defects are not unambiguous

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clinical entities. If chargeability to the rates is a metrical character, to which of the categories of genetic analysis does it belong? Mr. Lidbetter makes no attempt to answer the question. Is "living in sin" a sign even of the inheritance of "neuropathic constitution"?

Mr. Lidbetter, however, does not accept the assumptions of modern genetical science. He writes on p. 14 that "if we are to understand human heredity, even in the most simple cases, we must study the whole quality of the stock, not merely a particular aspect of it." To the geneticist this statement is meaningless. The modern theory of the gene involves the assumption of particulate inheritance. The "whole quality of the stock" must consist of the reciprocal effect of a multitude of genes, transmitted in definite numerical ways, and the environment to which they are exposed from the time of fertilization onwards. At present we have no technique for investigating this issue, and must restrict ourselves to the analysis of traits determined by at most a few genes. We can only hope to obtain knowledge concerning differences due to genetic differences and those due to environmental differences by taking definite clinical entities or metrical characters, and comparing the observed differences in a population with those predicted on the assumption that the defects or traits are determined exclusively by genetic agencies. This procedure requires usually a knowledge only of two generations, where the existence of a dominant gene is suspected, and one where a rare recessive is concerned, provided we collect a large sample of data and note also the incidence of consanguineous matings. At present pedigrees extending back to many generations cannot be used in the analysis of heredity, unless one adheres to the former theory of the inheritance of neuropathic constitution, for which there is not a particle of evidence.

Readers of the notes on the pedigrees will not fail also to observe a certain antique morality implicit in Mr. Lidbetter's notions concerning defectiveness. Pedigree No. 19 contains a number of cases where a man cohabited with one or more women besides his wife. The author seems to regard such behaviour as peculiar to his "social problem group." "Such conditions," he says on p. 127, "may exist in other sections of the community, but if so they are unknown to the writer." Should students of sociology be so innocent?

J. L. GRAY.

MEDIAEVAL RELIGION. By Christopher Dawson. The Forwood Lectures 1934 and Other Essays. *Sheed & Ward*, 1934. 6s. net.

In undertaking an investigation of the mutual interactions between the sociological and religious elements in mediæval culture, Mr. Christopher Dawson raises questions of peculiar interest to the sociologist. The functional school of social anthropologists in recent years has emphasized

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that on its creative side religion is the master-force of human culture, and nowhere is this more apparent than in mediæval Europe, where, as our author remarks, "religion and civilization were so closely united that religious institutions were the main organs of culture and almost every form of social activity possessed a religious sanction."

As the religion of the Roman Empire Christianity came to the northern barbarians as a civilizing force with the cultural traditions of Greece and the spiritual achievements of Israel behind it. But the Church of the Empire belonged essentially to the Mediterranean urban culture, and in establishing itself in the barbarian kingdoms it was compelled to create monastic institutions as fixed centres from which to radiate its influence. So successful was St. Benedict in adapting the monastic ideal to the conditions of Western culture that the Benedictine Rule became perhaps the most powerful cultural influence in Germany, Holland, Scandinavia, Poland, and England. But for the monasteries there would have been no place of peace and security for the nurture of scholars like Bede, Dunstan, Lanfranc, and Anselm, and the arts and letters would have been in grave danger of perishing altogether. As Mr. Dawson says, "the Carolingian abbeys were, apart from the royal palace, the only real centres of culture in the Empire. And their culture was almost entirely a Latin one, founded on the traditions of the Western Fathers and the old schools of rhetoric, as transmitted through the influence of Cassiodorus and Columbanus and the monastic schools of England and Ireland."

The mediæval Church, like Israel before it, was essentially a kingdom—"the representative of the tradition of Latin civilization and order"—and as such it recognized and performed its cultural functions with a considerable measure of success; the care of the sick and the poor, the provision of hostels for travellers, and the preservation of literature and learning. Over all the Papacy exercised an international authority, as the supreme court of appeal and source of justice. Nevertheless, as Mr. Dawson points out, Church and State were not identical in the Middle Ages. The Church was "the primary and fundamental social reality," while the State was a "subordinate institution charged with the office of preserving peace and order."

Mediæval civilization was a religious culture because its highest expressions, whether in art, literature, or philosophy, were dominated by religious motives, and since, as is admitted, "in matters of dogma mediæval religion is characterized above all by its conservative spirit," it was not a progressive culture. The reform of the Church in the eleventh century was largely a monastic movement, and from it sprang the social revival of Western Europe, inspired in the first instance by religious ideals. When Leo crowned Charlemagne on Christmas Day

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800 it seemed that the combination of the spiritual and secular authorities would restore the glories of the pagan empire, but the structure soon crumbled to decay in the struggle between Erastianism and ecclesiasticism. The second attempt, made nearly three hundred years later by Hildebrand, also failed, and the mediæval dream of a theocratic universal sovereignty passed away in the cultural achievements of the thirteenth century, despite the philosophical synthesis of scholasticism.

In the third chapter of this volume, an interesting account is given of the intellectual crisis which arose as a result of the Græco-Arabic scientific movement, and in the last of the four Forwood Lectures (which compose the main section of the book) attention is called to the development of a secular classical literary tradition in the Dark Ages which became an instrument in Christian education. "If the culture of the Dark Ages is a culture of schoolmasters, they were schoolmasters of Europe," it is maintained, "and all the subsequent achievement of Western culture rests on the foundation of their work."

Two additional essays are included to make up the volume. In the first (reprinted from the *Criterion*) the origins of the Romantic Tradition are discussed to supplement the fourth lecture, and in the second, William Langland and *The Vision of Piers Plowman* are treated in an illuminating manner. The entire work is one which merits the attention of all students of mediæval culture in its many aspects, and not least of those whose interest is mainly in the sociological foundations of the Middle Ages.

E. O. JAMES.

URBAN SOCIETY. By Noel T. Gist and L. A. Halberst. Thomas J. Cromwell Company, New York, 1934. \$3.50.

None of the specialisms subsumed under General Sociology has in recent years received so much attention as Urban Sociology, or the study of the structure and functions of city life. And the reason is not far to seek. The city is not only a typical product of civilization; it is also a social laboratory where all kinds of experiments in human adaptation and relationships are taking place and where the rapid dissolution of traditional forms of behaviour and thought can be best observed and analysed. Already numerous books have been written on this subject and a vast amount of data has accumulated, much of which is scattered and inaccessible. There has thus been a need for collecting and synthesizing the existing data—a need which this book admirably meets. In some respects it is similar to Carpenter's *Sociology of City Life* and Anderson's and Lindeman's *Urban Sociology*, but it is much more exhaustive and better organized.

The main topics dealt with are: the rise of urbanism; its distributive

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and selective aspects; social relationships in the city; the organization of life in the city; and planning and control of urban society. Throughout the authors emphasize the functional and dynamic aspects of city life—the city as rapidly changing, the city as a complicated formula in mobility. Their task, to use their American terminology, is “to describe processually the phenomenon of urbanism.”

What comes out very clearly is that more intensive research is needed if we are to answer conclusively some of the basic questions involved. What, for instance, are the sources of recruitment of a population of a given urban area, and to what degree does the native element maintain itself? Is it true, as is often alleged, that it is inherent in the nature of the city to consume its population? Or is this only a passing phase in an historical process. What precisely are the alleged selective influences of the city upon the physical and mental characters of the population? It is evident, too, that the city influences marriage, fertility, and death rates, and that the operation of these processes, differently upon urban and rural communities, and within the city upon different racial, national, and religious groups, tends to produce typical results that permit both of sociological and biological analysis and interpretation. Moreover, the city, with its mobility and extremes of wealth and poverty, its Gold Coast and Hobohemia, can be made to yield valuable information as to the composition of social groups and social types. A satisfactory study, for instance, of the Lumpen Proletariat, the scrap-heap of a city, has not yet been made.

The city is rightly regarded by the authors as a product not of design, but of numerous and natural complex forces which may be socially controlled and planned. Although they clearly see the dangers inherent in the “Megalopolis,” they find no reason for believing, with Spengler, that it will ultimately overwhelm its indwellers and the urban civilization of the West. They realize that in another order of society, as, for instance, the socialistic, the differences between the city and the country will be minimized, or even abolished altogether, and that there will result a totally different ecological pattern in the distribution of population. Indeed, is not the city as we know it the child of a specific historical epoch upon the dissolution of which its character will completely change? Has not each epoch its own laws of population? J. RUMNEY.

ECONOMIC AND SOCIAL ASPECTS OF CRIME IN INDIA.

By B. S. Haikerwal. *Allen & Unwin*, 1934. 10s.

Mr. Haikerwal has tackled a much-neglected but extremely important subject, and has succeeded in writing a most interesting account of the causes, nature, and treatment of crime in India. Apart from anthropo-

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logical surveys (dealing in particular with the criminal tribes) and official reports of various descriptions, the literature on the subject is extremely limited, and Mr. Haikerwal has depended on direct personal investigations and case-studies for the material for a number of his chapters. The University of Lucknow is to be congratulated on having made it possible for a realistic social study of this type to be undertaken.

Crime in India has certain distinguishing features, including the close correlation with economic conditions—so that the “crime barometer” varies directly with the quality of the harvests—and the existence of criminal tribes and classes (consisting of some four million persons), amongst whom crime “is a hereditary calling, with an elaborate code of discipline, etiquette, and even rituals.” Mr. Haikerwal also suggests that crime is “less violent and organized than in the West.” Possibly he was thinking of one particular Western Country. At any rate the statement is too sweeping, and from his own descriptions no one would conclude that crime is less violent and organized in India than, for instance, in England.

The reclamation of the criminal tribes is a unique and difficult problem, but is now being attacked with considerable success, chiefly by non-official organizations (in particular the Salvation Army). These afford facilities for training, and opportunities for settling down to honest employment, previously not available for the members of these tribes.

On the other hand, factors connected with the rapid social and economic changes at present taking place in India, unfortunately tend to increase crime amongst the general population. These include the loosening of family and caste ties, the decline in local self-government, and the development of large urban centres. The terrible housing conditions, absence of family life, and special temptations connected with city life, all make the great urban centres also centres of crime. More stress might perhaps have been laid on the effects of the increase in the number, in rural and urban areas alike, of those dependent solely on wages for a living. Such wage-labour is largely temporary and casual in nature, and thus tends to decrease social stability, to increase the economic stimulus to crime, and to remove the restraining influence of custom and tradition.

But it must not be thought that social changes are the main cause of crime. Mr. Haikerwal points out many causes of social maladjustment arising out of the traditional Indian customs and institutions.

The decline of the village Panchayets has been regretted on many grounds, and it is true that these indigenous self-governing bodies exercised a powerful control over India's enormous rural population. At the same time the account presented here of their functions and methods

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hardly gives the impression of the prevalence, in the "good old days," of justice and orderly procedure. Recent Provincial Village Self-Government Acts tend to restore interest and pride in local affairs, and it is to be hoped that a better basis for the prevention of crime will thereby be provided.

Mr. Haikerwal describes the Indian Penal and Criminal Procedure Codes, and their administration, and points out grave defects therein. Procedure is excessively intricate, litigation is expensive and dilatory, only a small percentage of those tried are convicted, and the opportunities for evasion are great. In fact, it can be said that "the belief gains ground, especially among the shrewder men in the countryside, that the law is for the rich and cunning. The illiterate masses feel helpless against the practical, though unintended, favouritism of the law and its processes." There is thus great need for revision and simplification of the codes, and it is to be hoped that this volume will help to draw attention to the need for, and thus promote, reform.

VERA ANTSEY.

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ANNALS OF THE AMERICAN ACADEMY	Jan.
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